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FM 100-10

FIELD MANUAL

COMBAT SERVICE SUPPORT

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HEADQUARTERS, DEPARTMENT OF THE ARMY

APRIL 1976

FOREWORD

This revision provides guidance on the effect of the DA directed implementation of the Echelons Above Division (EAD) Study, concentrating on the elimination of the field army support command (FASCOM) and its subordinate support brigades and replacing them with a newly formed corps support command (COSCOM). It also provides guidance on follow-on actions to the DA approved EAD study. These actions concentrate on the merger of the theater army support command (TASCOM) headquarters with the theater army (TA) headquarters; the elimination of the materiel command (MATCOM), with its field depots and COMMZ depot distribution system; the establishment of the COSCOM in the combat zone and the theater army area command (TAACOM) in the COMMZ as the highest organizational levels of supply and maintenance support in the theater; and the incorporation of supply concepts relying more heavily on CONUS theater oriented depots for direct supply as close to the using unit as possible. (Direct Support System)

Because of the far reaching effects of EAD and modifications thereto, revision of this manual has been extensive. However, the most significant impact has been on Chapter 3, Territorial and Command Organization, and Chapter 9, Logistics—Supply. Recipients are encouraged to submit recommendations for changes to the manuscript as indicated in chapter 1.

FIELD MANUAL
No. 100-10(TEST)

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D. C., *30 April 1976*

COMBAT SERVICE SUPPORT

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PART ONE

GENERAL

CHAPTER 1

INTRODUCTION

1-1. Purpose and Scope

a. This manual prescribes doctrine for use by commanders and staff officers at division and higher levels in providing combat service support (CSS) to the Army in the field. It specifically addresses combat service support at theater army major functional and area command and corps support command levels.

b. The following standardization agreements (STANAG), which are identified by type of agreement and number at the beginning of each appropriate chapter, are supported by the doctrine contained in this manual: Appendix C provides details of these agreements.

Title	NATO STANAG	CENTO STANAG	SEATO SEASTAG	ABCA SOLOG
Ammunition Supply Procedure	2034	2034	2034	..
Principles and Procedures for Establishing Communications	2043	2043	2043	..
Procedures for Disposition by Medical Installations of Allied Patients	2061	2061	2061	66
Straggler Control	2067	2067	2067	..
Rear Area Security and Rear Area Damage Control	2079	2079	2079	..
Handling and Reporting of Captured Enemy Equipment and Documents	2084	2084	2084	..
Medical Employment of Helicopters in Ground Warfare	2087	2087	2087	..
Logistics Assistance (Classified)	2135	....	....	..
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1-2. Explanation of Terms

Definitions and abbreviations used in this manual are in consonance with those contained in JCS Pub 1, AR 310-25, and AR 310-50. New terms and abbreviations have been established by published doctrine. The three major subdivisions of military activity are combat, combat support (CS), and combat service support (CSS). The distinction between combat support and combat service support must be made in order to understand this manual properly, although a branch of the Army may have both CS and CSS roles. The definitions are—

a. Combat Support — Operational assistance furnished combat elements by other designated units.

b. Combat Service Support — The assistance provided operating forces primarily in the fields of administrative services, chaplain services, civil affairs, finance, legal service, health services, military police, supply, maintenance, transportation, construction, acquisition and disposal of real property, facilities engineering, topographic and geodetic engineering functions, food service, graves registration, laundry, dry cleaning, bath, property disposal, local procurement and other logistic services.

1-3. Recommended Changes

Users of this publication are encouraged to submit recommended changes and comments to improve the publication. Comments should be keyed to the specific page, paragraph, and line of the text in which the change is recommended. Reasons should be provided for each comment to insure understanding and complete evaluation. Comments should be prepared using DA Form 2028 (Recommended Changes to Publications and Blank

Forms) and forwarded direct to the Commander, Logistics Center, ATTN: ATCL-CDL, Fort Lee, Va., 23801. Originators of proposed changes that would constitute a significant modification of approved Army doctrine may send an information copy, through command channels, to the Commander, Training and Doctrine Command, Ft. Monroe, Virginia 23651, ATTN: ATTS-AS-L, to facilitate review and followup action.

CHAPTER 2

OPERATIONAL ENVIRONMENT

2-1. General

a. Conflicts in which US forces may be employed involve a variety of situations and conditions. Proper task orientation and organization under the various operational environments encountered is essential to the successful accomplishment of the combat service support mission. In mission planning and execution, the commander must always consider the implications of these factors:

(1) General war remains a constant threat.

(2) Cold and limited war situations can occur anywhere in the world.

(3) Forces can conduct stability operations (the military portion of the overall program of internal defense and internal development) in any strategically significant area where insurgency has developed or is a threat (FM 100-20).

(4) Chemical, biological, and/or nuclear weapons may be employed by the enemy and nuclear or chemical weapons may be used by friendly forces.

(5) Terrain, climate, weather, and social and economic conditions differ greatly among the possible areas of conflict.

(6) Formal agreements with host countries on the status of forces may inhibit the freedom of military action. Similar inhibitions may arise from foreign policy considerations and from international law; for example, overflight restrictions may lengthen lines of communications.

b. In addition to those factors mentioned in *a* above the commander must also consider the realities of the austere environment in which he must operate. Actual force capabilities and limitations must be a basic consideration. The commander must strive to achieve an optimum combat capability through a flexible and realistic force structure in which nonessential units, materiel, systems, and services are not tolerated.

2-2. Contingency Operations

a. Contingency operations are likely to be conducted in a short-duration, limited objective, nonnuclear environment characterized by austerity of personnel and equipment. The contingency force will have its roots in the Continental United States (CONUS), relying heavily on strategic airlift for rapid deployment and resupply. A strong reliance on Air Force tactical air support and resupply indicates that such operations will be conducted as a joint task force and may require other service component representation. The initial deployed force will be of division size or larger, operating independently.

b. The philosophy of contingency operations is to rely on skillful execution by disciplined, well-trained units to achieve successfully decisive results with a minimum of forces. The following characteristics reflect the austere philosophy of contingency operations:

(1) Austere base development.

(2) Minimal standards of living.

(3) Stringent combat support and combat service support.

(4) Reliance on strategic airlift and sealift for the rapid deployment and continued sustainment of forces.

(5) Emphasis on the Air Force for close air support, tactical air reconnaissance, and tactical airlift.

(6) Significant reliance on the host country for security and intelligence early warning support.

c. Support for the force is the responsibility of a contingency force support command activated especially for such operations. The structure of the supporting unit is such that it can assume all essential theater-type CSS functions until the operation is concluded or escalates to a full-fledged theater of operations. FM 54-9 provides details on logistic support of contingency operations.

2-3. Nuclear, Biological, and Chemical Defense Measures

a. Nuclear, biological, and chemical (NBC) defensive measures require emphasis on the protection of facilities and installations, and on flexibility and mobility in the combat service support system. Large CSS installations are profitable targets for nuclear attack. The concentration of personnel necessary to operate such installations also invites enemy chemical or biological attack. Proper planning and execution can reduce the desirability for attacking these areas and the effects of such attacks. To provide continuing and effective support, the combat service support system must be flexible in terms of communications and transportation, and must have an adequate number of properly located and dispersed installations. Planning should emphasize the maintenance of the flow of supplies rather than the buildup of stocks by using a support system organized to perform throughput distribution on a routine basis. It is

necessary, however, to stock essential supplies near points of anticipated consumption to permit continued operations when lines of communication (LOC) are disrupted.

b. Alternate channels and procedures should exist for each type of support. Plans should provide for reestablishing the original channel, when interrupted, or for rapidly diverting support into alternate channels. Support means of any one type should not be concentrated, but widely dispersed as the mission and rear area protection permit.

c. Plans for the use of an area for a combat service support installation should include a vulnerability analysis. Camouflage and dummy positions reduce the probability of nuclear attack and sabotage on actual installations. Measures to reduce the effects of hostile attacks include properly arranging stored materiel; attaining maximum dispersion consistent with control; taking advantage of terrain features; using barricades, revetments, and underground shelters for protection; and thoroughly planning and executing area damage control.

d. It is necessary to disperse; protect; and, where possible, duplicate all facilities to the degree that the situation requires and the resources and mission permit. Factors considered include—

(1) The yield of the nuclear weapons, and the type and number of nuclear, biological, and chemical weapons systems the enemy is capable of using.

(2) The nature of terrain, to include natural and manmade facilities such as mines, caves, and tunnels.

(3) The numbers and types of CSS units available, the transportation net, and the availability of local civilian labor and other civilian resources.

(4) The reduced efficiency and increased vulnerability to sabotage and pilferage resulting from dispersed CSS operations.

(5) The calculated risk the command can accept.

(6) The disposition of other troops in the area.

(7) The tactical situation of the supported force.

(8) The degree of protection provided.

(9) The mutual support that military facilities and the civilian population and agencies can provide.

(10) The capabilities of the signal communications system.

(11) The degree of guerrilla activity and sabotage anticipated.

2-4. Enemy Employment of Nuclear, Biological, or Chemical (NBC) Weapons.

Basic preventive and corrective measures required to counter the effects of enemy employment of nuclear, biological, or chemical weapons are mentioned below under the functional area to which each applies. Basically, logistics doctrine will remain unchanged, but dispersion and alternate methods of accomplishing the logistics mission will be emphasized.

a. Supply. Reducing the vulnerability of supply operations requires dispersion, cover, the use of mobile supply points, and reliance on CONUS based supply sources for routine and noncritical requirements. Supplies suspected of exposure to contamination require detailed inspection, testing, and if necessary, decontamination prior to use or issue. Class I supplies and water sources suspected of NBC contamination demand special attention. There is an increase in requirements for the replacement of supplies of any class that have been contaminated by enemy chemical, biological, or nuclear munitions beyond the limits of reclamation. There is also an increase in replacement requirements because of the delay inherent in decontamination. There is an increased need for decontamination equipment and supplies, individual protective clothing, impregnation equipment and supplies, and other individual and unit protective equipment.

b. Maintenance. An NBC environment will increase the requirement for covered shop space. More time is necessary for repair of equipment that has been contaminated because it must be decontaminated prior to repair. Using units are responsible for decontaminating equipment, to the greatest extent practicable with authorized equipment and procedures, before it is turned in for maintenance. The receiving maintenance unit also checks for contamination. Separate storage sites within maintenance areas will be necessary for the storage, decontamination, and disposition of equipment prior to maintenance.

c. Transportation. Alternate supply routes and modes of transportation are of increased importance. Traffic regulation and control measures are necessary to prevent the use of contaminated routes. Detours and rerouting normally extend the turnaround time of transportation conveyances and reduce the gross movement capability. Where movement capabilities are reduced it may be necessary to increase the storage of supplies in order to prevent outages due to the inability to resupply.

d. Construction. Protective features are essential in key headquarters, communications and automatic data processing (ADP) facilities, and combat service support installations. Rehabilitation of damaged facilities is much more difficult and time consuming when these facilities also are contaminated. Rehabilitation forces do not normally undertake

restoration unless the area affected is of vital importance and the damaged facilities cannot be established elsewhere with less effort. For example consideration should be given to the use of locally available or requisitioned facilities.

e. Medical Support. There may be a sharp increase in the number of persons needing medical care, particularly in rear areas. Therefore, plans must be made to handle this increase, since it will generate a great disparity between medical resources and workload. In such circumstances, the Army Medical Department requires assistance in labor, transportation, utilities, and the decontamination of patients and facilities. Medical facilities should be established in areas away from potential nuclear targets. Medical self-help and buddy-care training programs should be established as a means of reducing suffering, conserving units effectiveness, and alleviating medical workloads. The principles and factors concerning evacuation of the wounded remain unchanged. As soon as possible after a nuclear strike on a friendly position, commitment of aircraft for evacuation missions should be given a high priority. During this phase, a priority mission for Army aircraft, particularly medium helicopters, is the movement of large numbers of patients to appropriate treatment or holding facilities.

f. Labor. Individuals who must wear protective masks and equipment work less efficiently, and there are increased requirements for personnel to perform decontamination tasks. Civilian laborers are reluctant to work in areas that are contaminated or remain potential enemy targets. The rules of the Geneva Conventions prohibit using Prisoner of War (PW) labor in contaminated areas unless the prisoners volunteer.

g. Military Police Services. Enemy chemical, biological, or nuclear weapons employment increases problems in discipline, law and order, traffic control, control of the movement of individuals, evacuation of PW, and the security of critical installations and materiel. Contamination of areas, facilities, and traffic routes—with the resulting confusion and loss of control—imposes heavy demands for the sealing off of stricken areas, the security of critical supplies, and the collection of individuals for return to their units.

h. Civil Affairs (CA)/Psychological Operations (PSYOP).
There is an increase in requirements for NBC defense, rear area protection measures, and medical support for cities and towns. These requirements include provisions for shelters and protective equipment, surveys to detect and mark contaminated areas, decontamination of vital facilities, and distribution of food and medical supplies for disaster relief and the prevention of diseases. In densely populated areas, the requirements for aiding civilian casualties could be overwhelming, and this problem could affect tactical operations. The need for calming the fears of the civilian populace is an additional consideration; psychological operations (PSYOP) are conducted to support this effort. For detailed CA and PSYOP information, see FM 41-10 and FM 33-1 respectively.

i. Intelligence. The early identification of intelligence planning and production requirements and subsequent timely dissemination of vulnerability studies, enemy capability estimates, counterintelligence reports, and terrain and traffic analysis studies may contribute materially to reducing the vulnerability of the command in an NBC environment.

j. Personnel Replacements. As a result of the significantly greater casualty rates expected in an NBC environment, the concept of unit replacements will play a larger role in maintaining adequate manpower levels in the theater (chap 16).

k. Field Services. NBC preventive and corrective measures for field service functions such as food service, clothing, exchange, bath, and laundry are extremely important since individual personnel are directly affected and involved. Details on the use of applicable shelters, protective coverings, radiological monitoring devices, and decontamination procedures can be found in FM 3-12 and FM 11-40.

l. Graves Registration. Mass casualties will create a severe graves registration problem. Early recovery and identification of remains will be extremely difficult, if not impossible, because of radioactive, biological, or chemical contamination. Mass burials may be required if the number of casualties is unusually great.

CHAPTER 3

TERRITORIAL AND COMMAND ORGANIZATION

Section I. GENERAL

3-1. Initial Theater Organization

Combat operations in an area where there is no established theater organization will normally be the responsibility of a contingency force supported by a contingency force support command (para 2-2). An initial division size or larger force will be deployed and gradually built into a three division light corps or larger force. If and when the situation warrants the establishment of a theater of operations with a theater army (TA) and major subordinate functional commands, the supporting unit can provide the basic force structure for its creation. The initial organization of the theater will depend on the needs of the forces assigned to the area of operations. The term "area of operations" is prescribed for joint or combined operations and is synonymous with the term "theater of operations." The general plans for the theater normally prescribe the initial organization.

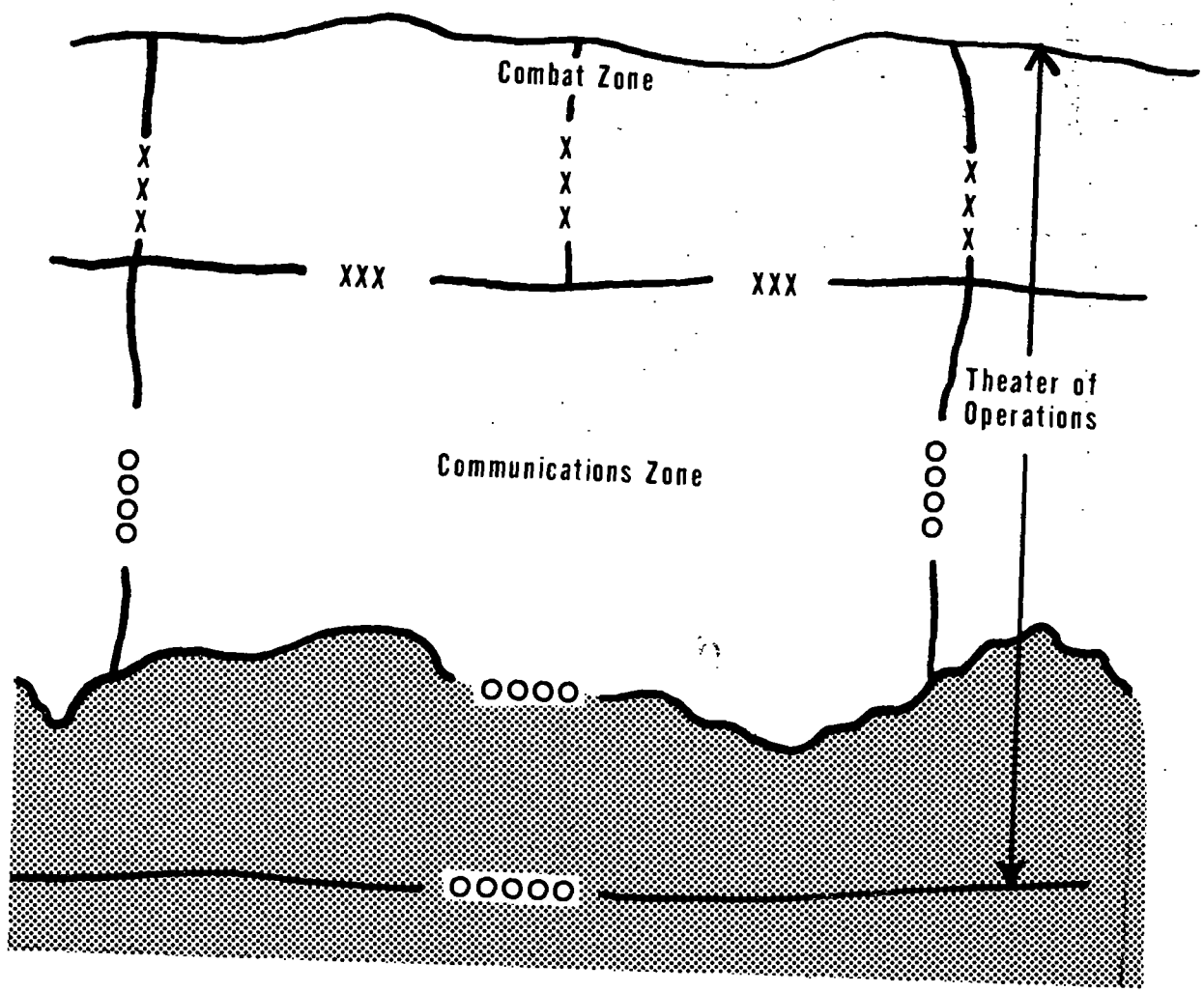
3-2. Subsequent Theater Organization

Subsequent organization is a responsibility of the unified command commander (theater commander) and is based on theater requirements and experience. Monetary constraints and troop ceilings will also impact upon theater organization.

Section II. TERRITORIAL ORGANIZATION

3-3. General

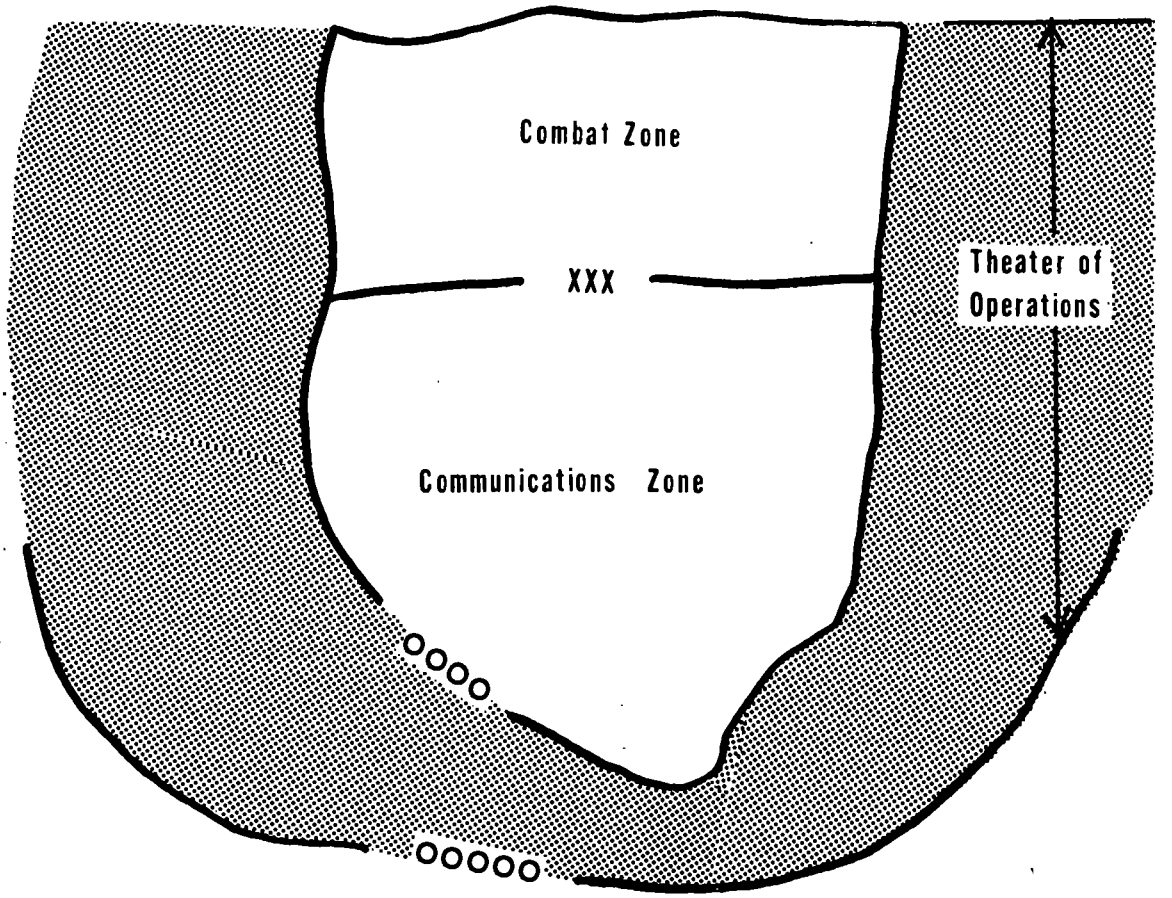
a. That portion of a theater of operations required for ground force operations normally is divided into a combat zone and a communications zone (COMMZ) (fig 3-1). The combat zone contains the area required by the corps for the conduct of combat, combat support, and combat service support operations. The COMMZ includes the lines of communication; units and facilities to perform supply, maintenance, transportation, and services functions; and the area required by units and facilities providing combat support and combat service support to elements in the COMMZ and backup support to units in the combat zone. Initially, a theater of operations may consist of the combat zone only, with combat service support provided directly from CONUS or from offshore bases.



NOTE: The Corps rear boundary XXX normally is also the rear boundary of the combat zone.

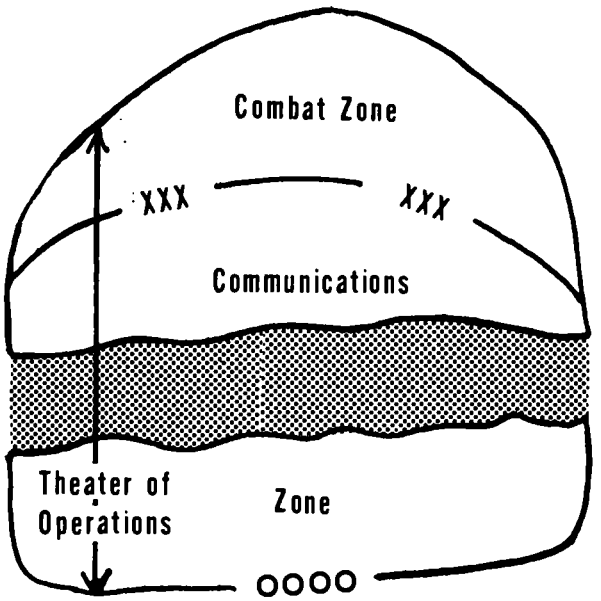
Figure 3-1. The United States portion of a theater of operations on a large landmass (schematic).

b. Territorial organization of a theater of operations varies with the type of theater, the type of forces involved, and the nature of operations planned. Figures 3-2 through 3-4 illustrate schematically, examples of various types of theaters of operations as affected by terrain.



NOTE: Size of landmass limits size of force in the theater.

Figure 3-2. Theater of operations on a small landmass (island or peninsula) (schematic).



NOTE: The COMMZ rear boundary (OOOO) coincides with the theater of operations rear boundary.

Figure 3-3. Theater of operations with the communications zone interrupted by a large expanse of water (schematic).

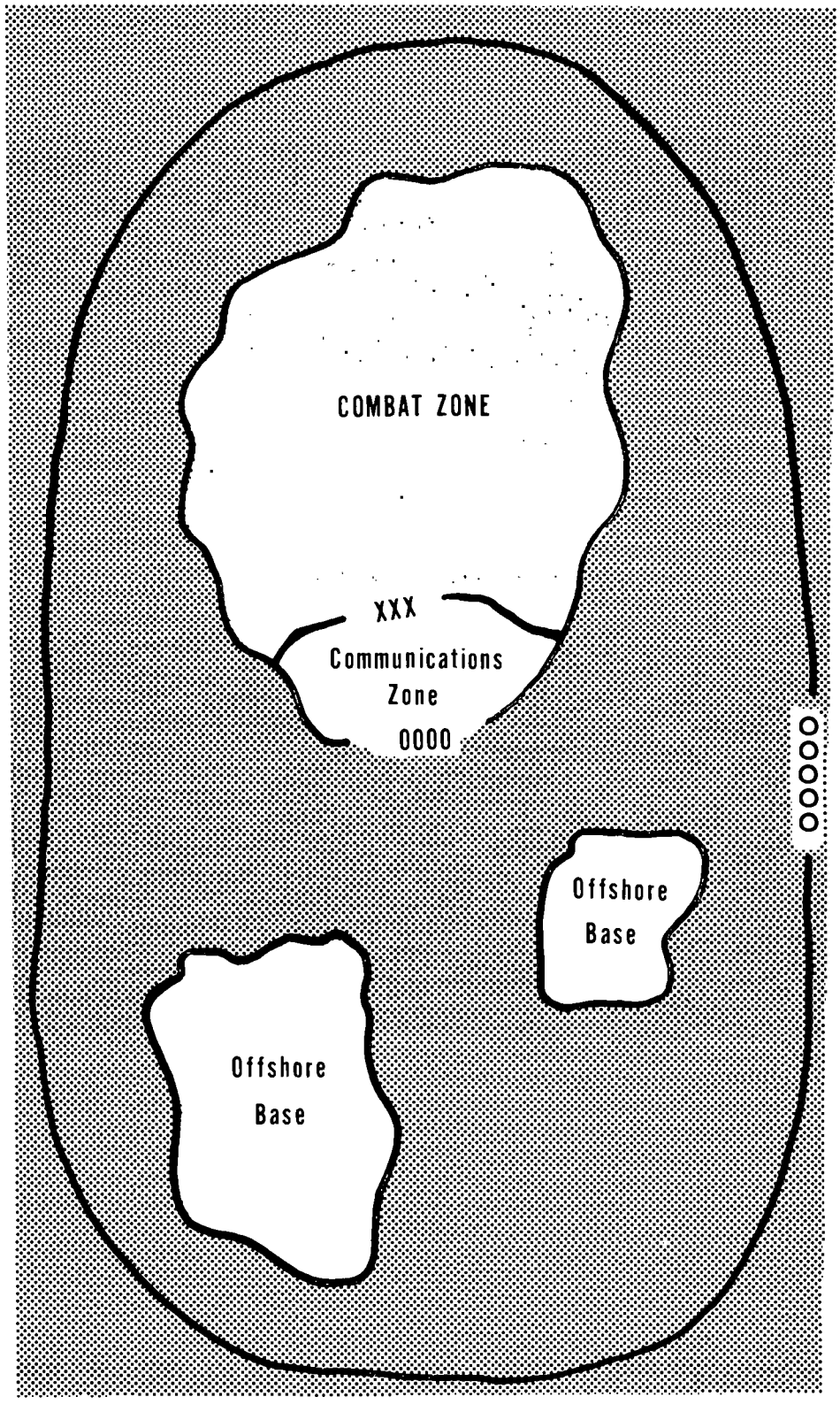


Figure 3-4. Theater of operations, island campaign (schematic).

c. Warfare in an ocean area may prevent the distinct separation of combat and combat service support operations that is achieved in a continental theater of operations. Combat service support

establishments serving the ocean area may be dispersed on islands throughout the theater.

d. In contingency operations of short duration, base development will be minimal and the distinction between geographic areas dedicated to combat and combat service support operations may not be required. Likewise, territorial organization for internal defense and development operations in an insurgency environment is not likely to incorporate corps rear boundaries nor to delineate a combat zone from a COMMZ because of the nonlinear nature of operations (para 3-7).

3-4. Communications Zone

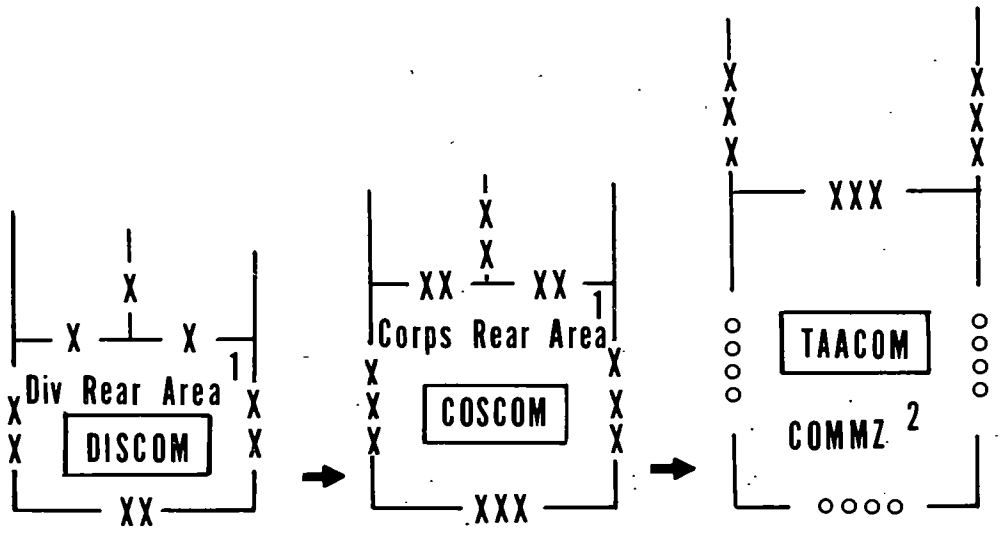
a. The situation and plans for future operations determine the manner in which the development of a COMMZ proceeds. Possible developments include—

(1) Initially establishing a division combat service support area and the subsequent growth into a COMMZ.

(2) Establishing a COMMZ with no intention of subsequent subdivision. Normally, the commander does not subdivide the COMMZ unless existing conditions make it necessary. An example of when the commander might subdivide a COMMZ is when the theater becomes extremely deep or when the geographic characteristics of the area so demand; e.g., an ocean area that includes island bases.

b. One sequence that may occur in the development of the COMMZ is as follows (fig 3-5);

(1) Initially, a division support command (DISCOM) supports a division-size force. The DISCOM is normally provided combat service support units which serve as a base for expansion as the force size increases. When the combat zone expands into a corps operation, a corps support command (COSCOM) is employed to provide additional support and command all organic nondivisional combat service support units. The COSCOM is provided additional nondivisional combat service support units to support the force and serve as a base for further expansion. When the combat zone expands further, the corps may be enlarged by the addition of combat and combat service support units within the COSCOM. Similarly, combat zone expansion may result in the introduction of an additional corps and accompanying corps support command to the theater of operations. In this situation a realignment of boundaries will be necessary to define areas of operation which include establishing limits of corps rear areas for each COSCOM. The COMMZ comes into being when the area has grown to a size which is too large for the corps commanders to control. Responsibility for the COMMZ is normally assigned to the theater army commander who further assigns responsibility to one or more theater army area command commanders to provide support to units in the COMMZ on an area basis. The organizational structure of the supporting forces in the COMMZ is dependent on the particular requirements of the area to be supported, considering the nature of planned operations and the geographical features and political boundaries of the area (fig 3-6). Paragraph 3-12*c*(5) discusses the functions of a TAACOM.



1. Territorial responsibility normally assigned to the commander of the Army forces.

2. Development as shown in figure 3-6.

Figure 3-5. Establishment of a division rear area with subsequent phasing to and development of a communications zone (schematic).

(2) As the rear boundary of the combat zone displaces forward and the depth of the COMMZ increases, the elements operating the lines of communications or executing other combat service support functions require expansion to maintain the required level of support.

(3) In a fully developed theater, the major functional commands of theater army—the personnel command (PERSCOM), medical command (MEDCOM), transportation command (TRANSCOM), and engineer command (ENCOM)—provide theater-wide general support services. Supply and maintenance general support (GS) to units located in the COMMZ is provided by a theater army area command (TAACOM).

(4) Most direct combat service support for units in the COMMZ is provided by area support groups (ASG) of the TAACOM. Other direct support (DS) is provided by the MEDCOM and ENCOM. The MEDCOM provides DS medical support while the ENCOM provides DS map supply, construction, and real property maintenance activity (RPMA) services. Paragraph 3-12*c* discusses the missions of the major functional and area commands of TA.

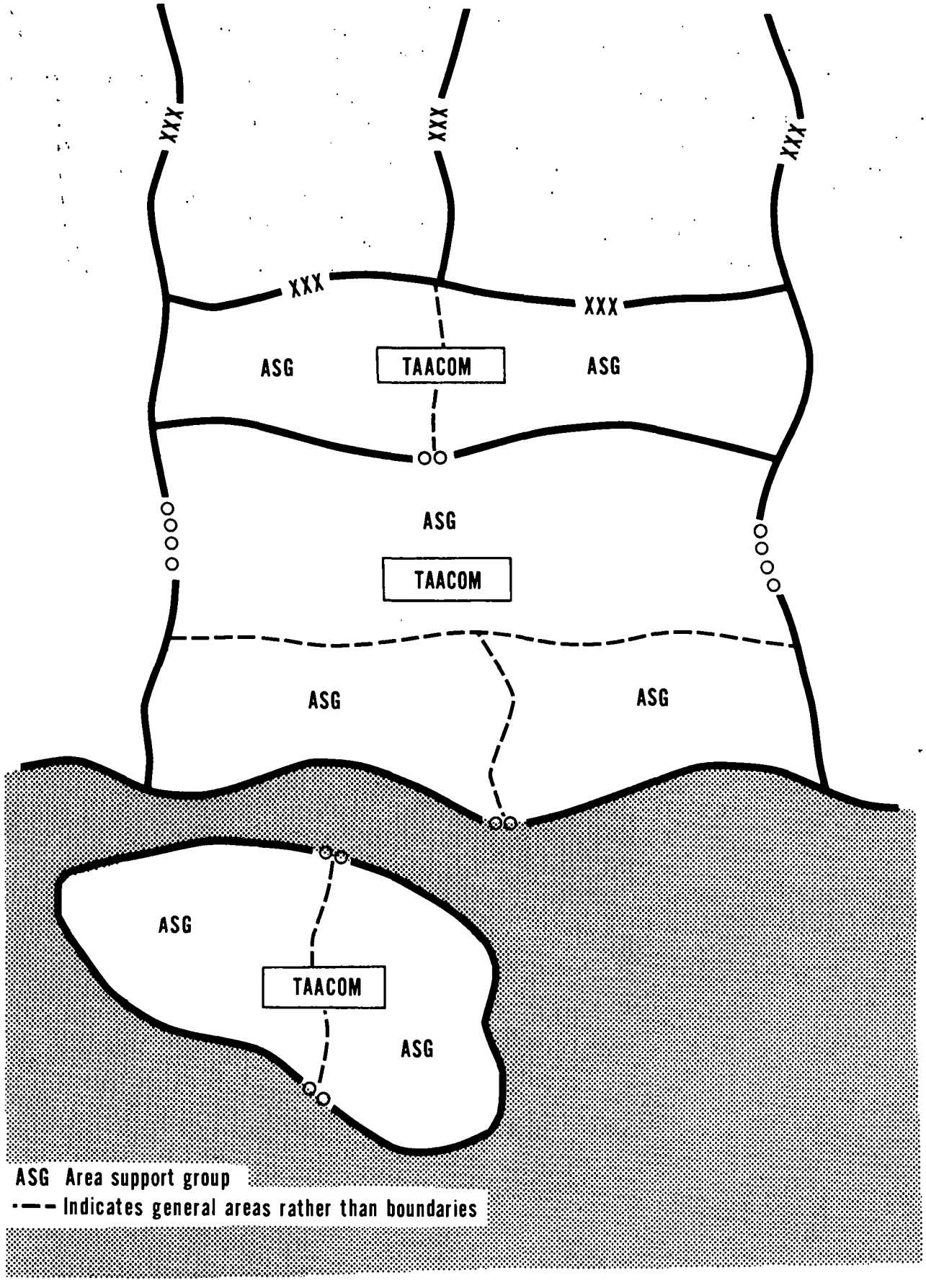
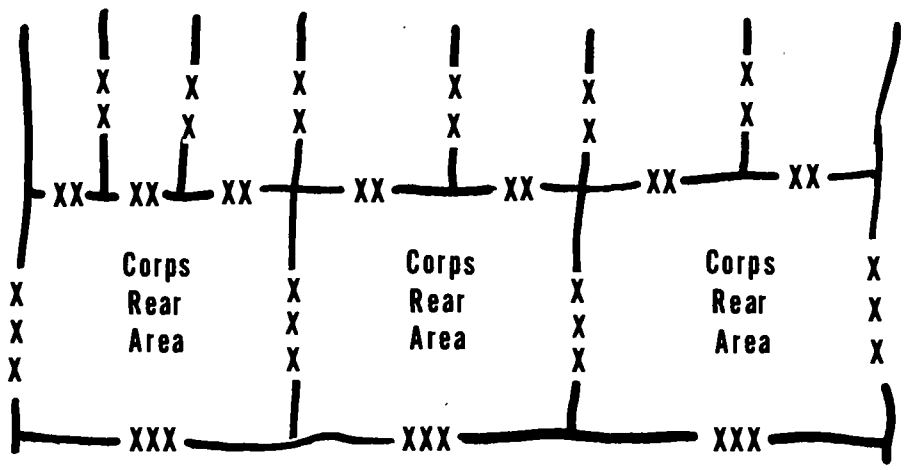


Figure 3-6. Example of a subdivided communications zone for a large theater of operations (schematic).

3-5. Combat Zone

The depth of the combat zone depends on the forces involved, the nature of planned operations, the character of the lines of communication, the terrain, and enemy capabilities. Normally, the combat zone is divided into corps and division areas (fig. 3-7). Each area is under the control of the commander of the organization to which it pertains.



NOTE: The corps rear boundary (XXX) normally is also the rear boundary of the combat zone.

Figure 3-7. Example of territorial organization of the combat zone (schematic).

3-6. Boundaries

a. Boundaries delineate territorial responsibility and aid coordination of combat service support operations. The President, through the Secretary of Defense, establishes the geographic limits of a theater of operations. The theater commander designates the rear boundary of the combat zone. Corps rear boundaries coincide with the rear boundary of the combat zone. Corps commanders designate division rear boundaries. Commanders establish rear boundaries of subordinate commands as far forward as practicable to reduce territorial responsibilities of the combat commands. The corps rear boundary is the forward boundary of the COMMZ. When the theater commander does not desire to extend the territorial responsibility of the COMMZ to the rear of the theater of operations, he may designate a different rear boundary for the COMMZ. Territorial responsibility for bodies of water separating landmass areas within the COMMZ is normally assigned to the theater navy commander.

b. Considerations affecting the location of rear boundaries include—

(1) Locations far enough to the rear to provide room for maneuver and suitable area for combat service support installations.

(2) Movement forward as soon as practicable to relieve combat units of the administration of territory not required for their operations.

(3) Location in relationship to the road net and other lines of communication. Corps requires good

lateral routes behind division rear boundaries to facilitate movement of troops and supplies.

(4) Identification with easily recognizable terrain features, such as roads, railroads, rivers, and canals.

(5) Planning the movement of the rear boundary well in advance to permit reconnaissance before the transfer of territorial responsibilities.

(6) If feasible, the use of political boundaries as a means of reducing the coordination requirements of the commander having territorial responsibility.

c. Boundaries are not barriers to combat service support operations. Through coordination between responsible headquarters, service installations and operations of one command may be present in the area of another.

3-7. Internal Defense and Internal Development Operations

Organization for internal defense and internal development operations depends on the nature of the insurgency, the desires and capabilities of the host country government, the type and amount of US support requested and required, and the presence of third country forces. During an insurgency, and depending on its intensity, the government of the developing nation may have from full to very limited control of the population and resources of the national area. Characteristically, combat service support and combat operations will take place in the same geographic area, and there will be no COMMZ and combat zone as such. Consequently, the organization of the area will vary according to the situation and is considerably different from that in a theater of operations in a limited or general war as described herein. In a combined operation with allies, the host countries retain their sovereignty, therefore location of installations and bases is largely dependent on the areas that the host countries can and agree to make available.

Section III. THEATER COMPONENT COMMANDS

3-8. General

a. The US theater of operations as discussed in this manual is a unified theater command established on an area basis (JCS Pub 2). The theater commander organizes the command in a manner consistent with the fulfillment of the mission and according to the characteristics and military service identity of the forces assigned.

b. The organization of the military service forces in a theater is usually unilateral along departmental lines; thus, each component force (Army, Navy, and Air Force) has its own organization for providing combat service support. Exceptions occur when support is otherwise provided for by agreements or assignments involving common, joint, or cross-servicing at force, theater, military department, or Department of Defense level, e.g., medical support.

c. Forces assigned to the theater commander will consist of two or more service components, each of which will be commanded directly by an officer of that component. Unless authorized by the establishing authority, the commander of service components or other subordinate commands will not be the theater commander (JCS Pub 2).

d. A component command consists of the component commander and the individuals, organizations, and installations under his military command that are assigned to the operational command of the theater commander. Other individuals, organizations, and installations may operate directly under the component commander in his service role and contribute to the mission of the unified (theater) command as appropriate.

e. Each component commander is responsible for making recommendations to the theater commander on the proper employment of his component, and for accomplishing such missions as the theater commander assigns. Each component commander communicates directly with his service chief (Chief of Staff, US Army, for Army component commanders) on uniservice matters relating to administration, personnel, training, logistics, communications, combat developments, and other matters of uniservice interest. When intelligence matters are of uniservice interest, the component commander communicates directly with his service chief.

f. The component commander is responsible for—

(1) Internal security, administration, and discipline.

(2) Training in service peculiar and joint doctrines, techniques, and tactics.

(3) Logistic functions normal to the component, except as higher authority otherwise directs.

(4) Tactical employment of the forces of his component not under operational command of a joint or combined force or other designated commander.

(5) Service intelligence matters.

(6) Task organization of component combat service support organizations.

g. The component commanders operate their combat service support systems in accordance with

departmental instructions subject to the directive authority of the theater commander in the field of logistics (JCS Pub 2). This directive authority of the theater commander insures effectiveness and economy of operations and prevents or eliminates unnecessary duplication of facilities and functions among the service components. It includes review of budgets and requirements of the service components and coordination and assignment of priorities and programs to use supplies, facilities, and personnel effectively while providing a balanced effort in the furtherance of the theater mission. The theater commander normally exercises this authority by establishing controls on the following service component functions:

(1) Acquisition, storage, movement, distribution, maintenance, evacuation, and disposition of materiel.

(2) Movement and evacuation of personnel.

(3) Acquisition or construction, maintenance, operation, and disposition of facilities.

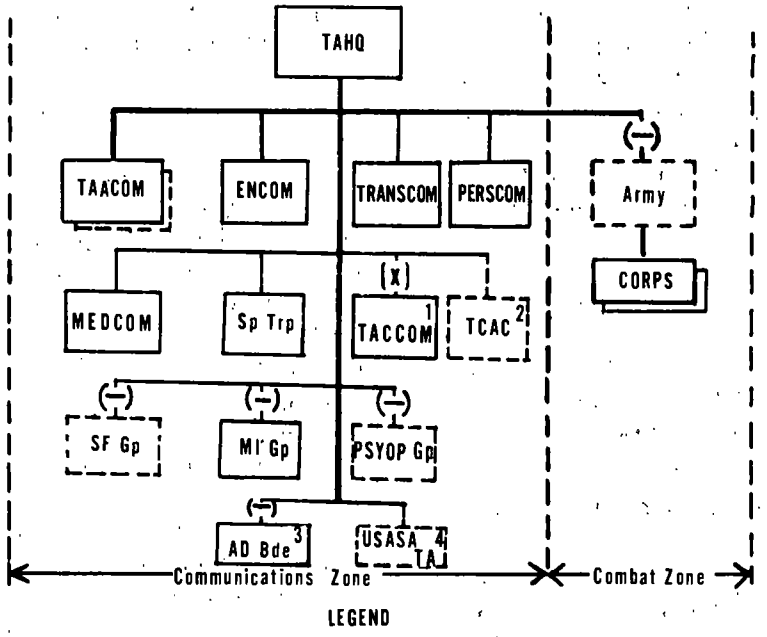
(4) Acquisition or furnishing of services.

3-9. Army Component Commander (Theater Army Commander)

a. Paragraphs 3-8*e*, 3-8*f*, and 3-8*g* above delineate some of the theater army commander's responsibilities as a component commander. In peacetime, the theater army commander will normally retain command and operational control of all US Army forces in the theater, except Army air defense artillery elements, US Army security agency elements, and theater army communications command elements (operational control only). The theater commander will establish air defense priorities, allocate air defense resources, and appoint a single area air defense commander, normally the Air Force component commander, responsible for coordinating and integrating the theater air defense effort. The theater army commander is also responsible for broad policies pertaining to US Army forces in the theater and for the command of all US Army forces assigned to his command.

b. Strategic and tactical direction of US Army forces in a theater of operations is exercised by the theater commander (or combined command commander when a combined command is established). The theater commander may establish a subordinate unified command headquarters through which operational command will be exercised. Commanders of service components of subordinate unified commands will communicate directly with the commanders of the service components of the unified command on matters which are the responsibility of the military departments and services, or as directed by their chief of service.

c. Figure 3-8 illustrates some of the basic elements of a representative theater army command.



LEGEND

As required
Command
Operational control
Command. During wartime, the commander of the unified or combined command normally exercises operational command.

1 THEATER ARMY COMMUNICATIONS COMMAND

2 THEATER CIVIL AFFAIRS COMMAND (SEE PAR 3-14 FOR ASSIGNMENT).

3 AIR DEFENSE BRIGADE (MAY BE DESIGNATED AS AD COMMAND).

4 PROVIDES SUPPORT IN ACCORDANCE WITH AR 10-122

Figure 3-8. Theater army organization (large theater of operations).

d. The combat service support mission of US theater army is to—

(1) Organize and operate the necessary services for combat service support of US Army forces in the theater. This entails long range planning, estimates of personnel and logistic requirements, and efficient use of resources. It requires close liaison with collateral and higher headquarters and the commands directly subordinate to US theater army.

(2) Provide common supply items and common services to other US service elements and allies in the theater as provided for by agreements or assignments.

(3) Provide combat service support to civilian and other agencies and forces as directed.

(4) Allocate critical and regulated items of supply.

e. The theater army commander retains overall control of combat service support operations to insure uniformity of the support effort in the combat zone and the COMMZ. The commander exercises control through promulgation of appropriate policies, mission directives, broad planning and program guidance, allocations, and priorities for accomplishing the theater army mission.

f. In some conflicts, the theater of operations may be smaller than that implied in *d*, above. In such cases, the Army component of the theater may consist of a single corps or a smaller force. The concepts of organization, mission, and functions

outlined above are applicable to the smaller theater, modified as necessary to satisfy its requirements. When a corps is the major Army component of a theater, its COSCOM will be tailored to provide the theater army base activities normally provided by the major functional commands of TA. When corps headquarters has theater army responsibilities, it is, in effect, the Army component command.

3-10. Navy Component Commander

a. Responsibilities of the Navy component commander for Navy forces under his command generally parallel those of the theater army commander for theater army forces.

b. Navy combat forces with logistic elements formed in a task organization are assigned to the theater from a numbered fleet. The Navy component commander exercises command through the commander of the Navy combat forces. Navy forces assigned to the theater are structured for the task anticipated.

c. In addition to the elements under the Navy component commander, other navy elements used for strategic operations may be present in the theater under the operational direction of the Department of Defense or a specified command.

3-11. Air Force Component Commander

a. Responsibilities of the Air Force component commander for Air Force elements under his command generally parallel those of the theater army commander for theater army forces.

b. Allocation of Air Force combat forces to the theater is on the basis of the assigned mission. Air Force logistic elements in the theater down to depot level remain under the command control of the Air Force Logistics Command in the CONUS but are immediately responsive to the Air Force component command.

c. In addition to the elements under the Air Force component commander, other Air Force elements used for strategic operations may be present in the theater under the operational direction of the Department of Defense or a specified command.

Section IV. ORGANIZATIONS IN THE COMMUNICATIONS ZONE

3-12. Theater Army Major Functional and Area Commands

a. Mission. The theater army major functional and area commands (i.e. PERSCOM, TRANSCOM, ENCOM, MEDCOM and TAACOM) provide combat service support to Army forces in a theater of operations and to other forces as designated. Services provided include—

(1) Theater side services to TA and other services and allied as directed.

(2) General support to the corps.

(3) Direct and general support to units located in the COMMZ and DS to units passing through the COMMZ.

(4) Rear area protection (RAP) in the COMMZ.

(5) Area emergency warning in the COMMZ.

b. Functions. Functions performed by the commands include personnel, financial, administrative, morale, engineer, military police, and logistical services. Logistical services include civil affairs (CA), labor, materiel maintenance, supply, transportation, and health services. Logistic related engineer functions performed by the ENCOM include construction, topographic support, and real property maintenance activities (RPMA).

c. Organization. The major functional and area commands of TA consist of five commands and, in addition, may include a civil affairs unit. The commands and their mission are:

(1) *Personnel command.* The personnel command (PERSCOM) directs, coordinates and provides general support (GS) personnal, financial, administrative, morale (chaplain, postal and recreation services), and internment (prisoner of war and civilian internee) services to the theater. For more detailed information, see FM 29-6.

(2) *Medical command.* The medical command (MEDCOM) provides medical support (para 17-9*d*) within the theater of operations. The MEDCOM provides command, control, staff planning, supervision of operations, medical supply control, training, and administration of hospital centers and medical groups engaged in COMMZ level medical support. For more detailed information, see FM 8-10.

(3) *Transportation command.* The transportation command (TRANSCOM) provides Army transportation services to a theater of operations. TRANSCOM provides combat service support in three functional areas: staff transportation, mode operations, and terminal services. For more detailed information, see FM 55-1.

(4) *Engineer command.* The ENCOM provides general troop and contractual construction, RPMA, and topographic support to the Army and other services and allies within the COMMZ; and support to the corps on a task basis, as required. For more detailed information, see FM 5-162.

(5) *Theater army area command.* The TAACOM provides DS/GS supply and maintenance, and DS personnel, financial, military police, and other services (less medical, communications security logistic, RPMA, and map supply) to units passing through or located in the COMMZ and to other forces as directed. It may also be called upon to provide limited GS backup supply and maintenance to the corps. The TAACOM is also responsible for planning, coordinating, and executing RAP operations within the COMMZ. For additional information of RAP in the TAACOM see FM 100-15.

(6) *Civil affairs unit.* The CA unit may be employed to exercise command and control (centralized execution) or command less operational control (decentralized control) over civil affairs units operating in the COMMZ.

d. Forces Supported by the Theater Army Major Functional and Area Commands. Forces supported include the following:

(1) The US Army elements of joint, unified, or combined headquarters and units.

(2) Headquarters, theater army (TA).

(3) One or more corps.

(4) Theater army air defense command (when used).

(5) Theater civil affairs command (TCAC) (when used).

(6) Theater army military intelligence group (when authorized).

(7) Theater army reserve units.

(8) Theater army communications command (TACCOM).

(9) The US Army Security Agency (USASA) units.

(10) Other US Army units located in or passing through the COMMZ.

(11) Other US military services, US government agencies, Allied military forces, and civilian populations so designated by the theater army commander.

e. Relationships of Commands With Other Headquarters.

(1) *With theater army.* Theater army headquarters provides mission-type orders to the commands for the conduct of theater army activities, together with necessary policies, priorities, allocations, directives, and guidance for execution of assigned missions. Theater army headquarters formulates procedures and guidance for the establishment of appropriate channels of communication between CONUS and the commands; between the commands and other services. Allied forces, and governments; and between the command and the corps. They communicate directly with other elements located in the COMMZ and with the corps in the conduct of operations, within policies stated by theater army.

(2) *With corps.* The commands must, where applicable, receive quantitative requirements for support from the corps stated in terms of what, where, and when personnel replacements, supplies, services, and equipment are needed. The commands assist the corps in formulating these requirements and support corps requirements as appropriate. For routine operations the corps support command (COSCOM) and the commands maintain continuing working relationships through liaison and technical channels.

(3) *With theater army communications command.* The theater army communications command (TACCOM) provides and operates the theater army communication system (TACS) and provides the interface of the TACS with the defense communications system (DCS) worldwide military command and control system (WWMCCS). The TACCOM provides the signal operations companies that operate the internal communications of the major headquarters and area-oriented units of the TAACOM as part of the TACS command and area subsystems in the COMMZ. The TAACOM provides combat service support to the TACCOM in accordance with the overall support agreement.

(4) *With the military intelligence group theater army.* The group provides military intelligence (MI) support to the theater army by operating in direct support of the theater army headquarters and in general support of the MI units assigned to the corps and the commands.

(5) *With allied or indigenous forces.* The commands provide combat service support as directed by theater army. Once the type of support to be provided is determined, they assist Allied and indigenous forces in formulating the support required and insure rapid reaction to demands in much the same manner that support is provided the US corps.

(6) *With all organizations supported.* The commands provide combat service support as designated by theater army. Theater army directs the degree of authority that the TAACOM will exercise over other organizations in the COMMZ in performing area emergency warning and RAP activities.

3-13. Theater Army Communications Command

a. General. This command extends communications from the theater rear boundary, where access to the defense communications system and WWMCCS is available, into corps areas where communications access points are established at area

signal centers. It also provides the command and area subsystems in the COMMZ and communications security (COMSEC) logistics support to the theater. Signal units of the theater army communications command are provided to major headquarters and area-oriented units of the functional commands. The theater army communications command, a subordinate element of the US Army Communications Command, is under the operational control of the theater army commander. It receives direct and general combat service support from the TA major functional and area commands.

b. Communications Security Logistics Support.

(1) Organizational elements for providing COMSEC logistic support in a theater of operations are the theater COMSEC logistic support center (TCLSC), the COMSEC logistic support center [redacted] (CLSC), and the COMSEC logistic support unit (CLSU).

(2) The TCSLC is the principal COMSEC logistic support facility in the theater. The TCLSC is an element of the theater army communications command and, as such, is responsive to the Army component commander through the theater army communications command commander.

(3) The CLSC provides COMSEC logistic support to a corps or equivalent force, and to other activities as directed; e.g., other services, the US Department of State, and Allied commands. The CLSC is responsive to the corps commander through the corps communications-electronics (C-E) staff officer and is under the technical direction of the TCLSC.

(4) The CLSU is an organic element of the CLSC and provides DS and GS COMSEC logistic support and has a mobile maintenance capability. The CLSU may be established to meet variations in the typical theater or corps. It can be an organic element of a TCSLC or a separate unit for support on a geographic area basis. In the latter case, the CLSU may be an element of a theater army communications command subordinate command but remains under the technical direction of the TCLSC. Normally the CLSU provides—

1. Integrated management of COMSEC materiel, to stock control of COMSEC equipment, ancillary items, special tools and test equipment, designated repair parts and software.

2. Collection, maintenance and reporting of COMSEC logistic data as prescribed.

3. Management and control of joint and allied COMSEC software as assigned.

4. Receipt, storage and issue of COMSEC materiel.

5. DS and GS maintenance on COMSEC equipment.

6. Mobile maintenance contact teams.

3-14. The Theater Civil Affairs Command

When used, the theater civil affairs command (TCAC) operates as a CA or civil-military operations (CMO) staff element of a combined, theater, or theater army command, and may serve as a CA command in a theater of operations. Should the theater commander desire to delegate civil affairs authority, he normally delegates authority for the combat zone to the corps commander. When a TCAC is utilized there is not normally a CA unit in the corps.

3-15. Military Intelligence Organization at Theater Army

The MI unit in support of the TA assists in performing those intelligence activities for which the TA headquarters retains centralized control. Such activities include overall direction of intelligence production and collection, counterintelligence, technical intelligence, and intelligence resources management. The MI unit at TA is discussed completely in FM 30-9.

3-16. Other Major Units

The TA major functional and area commands provide combat service support to the theater army air defense command, theater army reserve forces, USASA units, other units and other military services, Allied military forces, local governments, and civilian populations as directed by the theater army commander.

Section. V. ORGANIZATIONS IN THE COMBAT ZONE

3-17. Numbered Armies

a. The employment of numbered armies is an exception but may be necessary in wartime in a large theater of operations where the land force structure reaches a magnitude that requires an intermediate control unit between the theater commander and the corps. In small theaters, the largest land force element may be a single corps.

b. When utilized, the numbered army directs the strategic and tactical operations of multiple corps. It functions under the command, less operational control, of the theater army commander. Operational

control is exercised by the theater or unified commander.

c. The numbered army normally does not operate combat service support installations. It does, however—

(1) Establish priorities for supplies for its assigned and attached troops.

(2) Establish priorities for movements.

(3) Establish priorities for the allocation of replacements to its major subordinate commands.

(4) Allocate available service troops to its major subordinate commands.

(5) Normally control allocation of ammunition to its major subordinate commands and may control allocation of other items and services in accordance with assigned tactical missions.

(6) Determine the adequacy of support to subordinate units by supporting theater army commands.

(7) Estimate overall combat service support troop and supply requirements to support operations and make recommendations to the theater army commander for the allocation of appropriate resources.

(8) Assign territorial responsibilities to subordinate corps.

(9) Supervise and coordinate the CA activities of subordinate and supporting units.

3-18. Corps

a. In peacetime, the corps in an established theater is under the command of the theater army commander. In wartime, however, operational control of the corps is normally assumed by the theater commander or unified command commander.

b. The corps is the largest self-contained US Army organization that has combat, combat support, and combat service support functions. It consists of a headquarters; a corps support command (COSCOM); a variable number of divisions; and other units, such as artillery, signal, military police (MP), engineer, military intelligence, and Army Security Agency (ASA).

c. The corps has no fixed organization. Determinants in the numbers and types of divisions, and other combat and supporting elements are the mission, availability of forces, availability and use of nuclear weapons, terrain, climate, and probable hostile forces. Figure 3-9 shows the organization of an illustrative corps. Units will be tailored in size to meet tactical and support requirements.

d. The corps commander is responsible for the organization and operation of services necessary for the immediate support of units in the corps. This requires long range planning, preparation of detailed estimates of combat service support needs, and close liaison with other major commands.

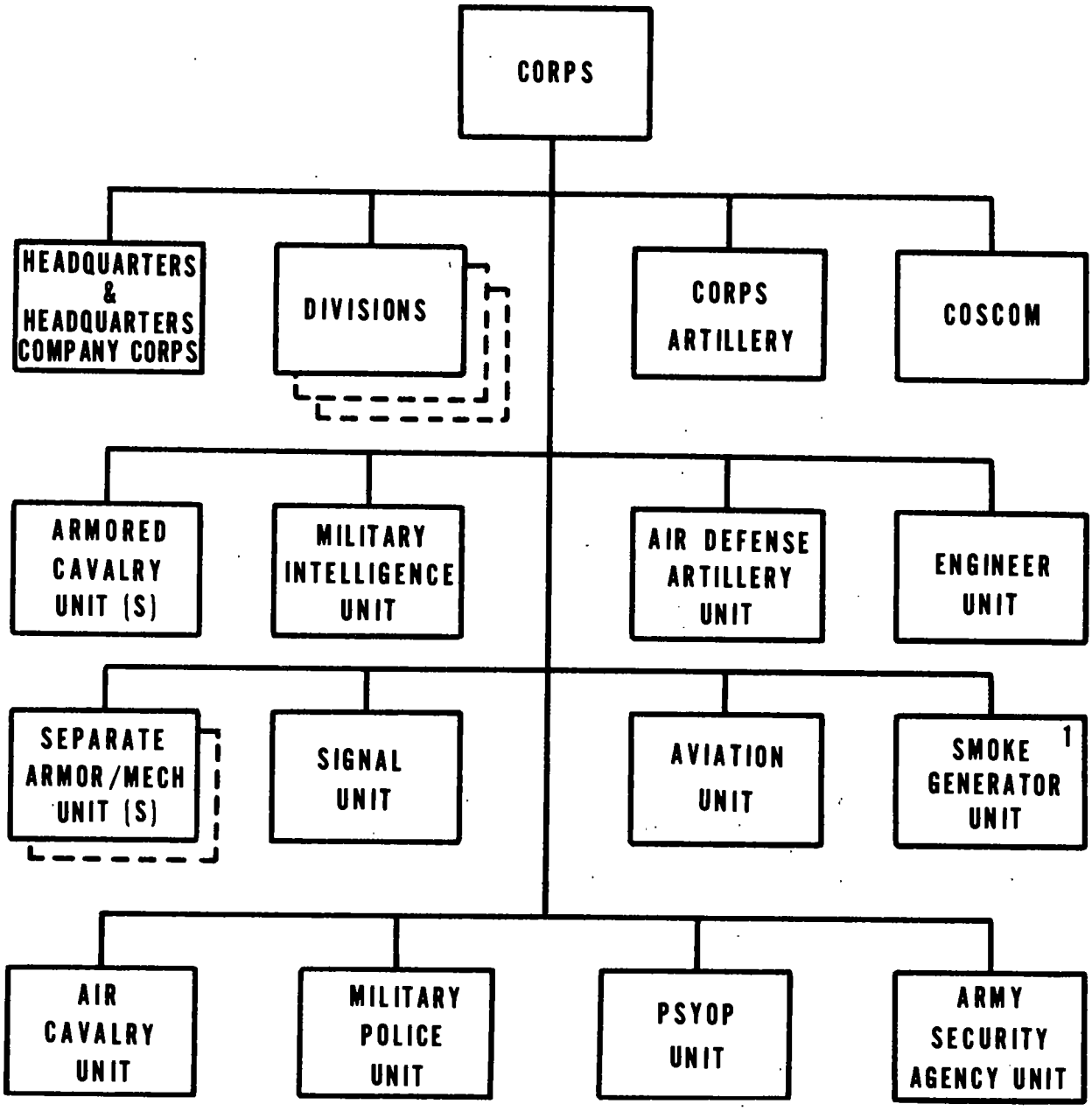


Figure 3-9. Organization of a corps.

3-19. Corps Support Command

a. General. For details on the COSCOM, see FM 54-9.

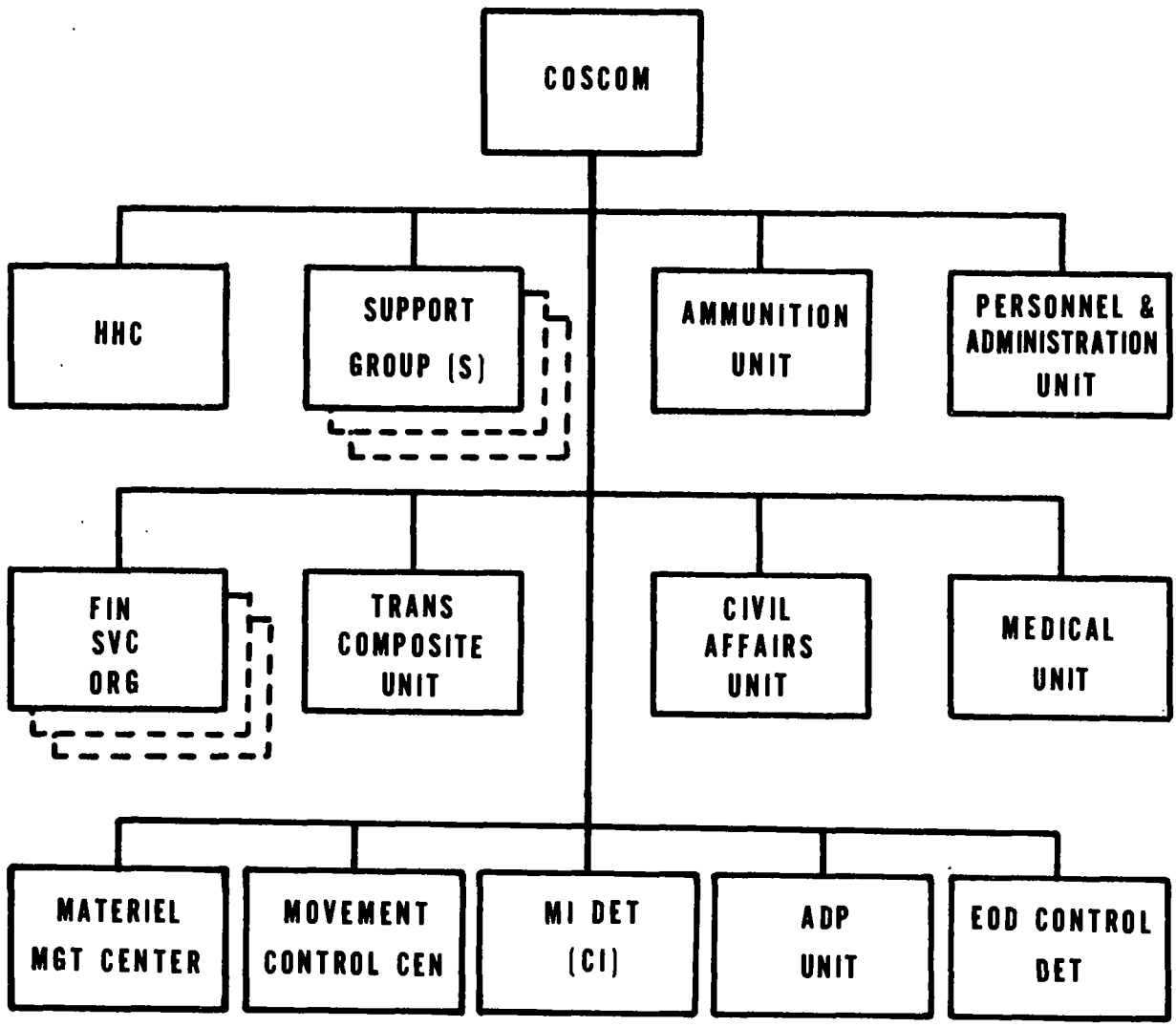
b. Mission. Within assigned reponsibilities, the COSCOM provides combat service support to a corps (or other supported forces). The COSCOM is normally repsonsible for RAP for the corps rear area.

c. Functions. Combat service support functions performed by the COSCOM include personnel, finance, ADP, administration, civil affairs, maintenance, supply, transportation, and other services.

d. Construction Function. The COSCOM does not have a construction or RPMA function. The corps engineer provides and exercises staff and technical supervision over construction in the combat zone through the corps engineer unit. When the construction capabilities of this unit are exceeded, the heavier units of the ENCOM are sent forward from the communications zone to complete mission-type tasks. In this event, their activities are coordinated by the corps engineer with the appropriate ENCOM engineer officer.

e. Organization. The COSCOM, a highly flexible organization, normally supports a corps with a headquarters and associated functional control centers, materiel management center (MMC) and a movement control eenter (MCC). The organization of the COSCOM is tailored to fit its mission requirements, however major COSCOM commands normally include two or more support groups, an ammunition unit, a transportation composite unit, a personnel and administration unit, a civil affairs

unit, a medical unit, finance service organization(s), and an explosive ordnance disposal control detachment. Figure 3-10 shows the organization of an illustrative COSCOM.



NOTES:

a. Command structure of subordinate units are not rigid, i.e., groups will become brigades or brigades will be replaced by groups depending on the magnitude of the mission requirements.

b. Company, battalion or group sized organizations are assigned to the subordinate commands to tailor the support capability to meet the corps force requirements.

LEGEND: -- Indicates a variable number of assigned organizations.

Figure 3-10. Organization of a corps support command (COSCOM).

(1) *Support groups.* The support groups must be responsive to the combat service support needs of the corps. They provide GS supply and maintenance to divisions and separate brigades and DS and GS supply and maintenance to nondivisional units within the corps area.

(2) *Ammunition unit.* The ammunition unit provides special and conventional DS and GS ammunition services for the corps.

(3) *Personnel and administration unit.* The personnel and administration unit provides personnel and administrative support, recreation services, and band support to all supported units on an area basis.

(4) *Finance service organization (s).* Finance service organization(s) fromed into composite units normally designated as Finance Sections (Disbursing) provide direct finance support to nondivisional units in the corps rear area on an area/population served basis.

(5) *Transportation composite unit.* The transportation composite unit provides motor transport, Army air transport, and terminal transfer service to the corps area. FM 55-1 shows the organization of a transportation composite unit.

(6) *Civil affairs unit.* The civil affairs unit provides civil affairs support to insure accomplishment of corps tactical mission. FM 41-10 shows the organization of a civil affairs unit.

(7) *Medical unit.* The medical unit provides evacuation, hospitalization, medical regulating and optometric, medical supply and maintenance, dental, veterinarian, laboratory and preventive medicine services. Medical supply regulated by the medical unit is as directed by AR 40-61. In this connection, the management of medical materiel will not be included with the movement of other commodities without the approval of The Surgeon General (TSG). Paragraph 2-10, AR 11-8, addresses the logistics responsibilities of TSG. FM 8-10 shows the organization of a medical unit in detail.

(8) *Explosive ordnance disposal control detachment.* The explosive ordnance disposal control detachment exercises command and operational control over ordnance disposal detachments dispersed throughout the corps area. The control detachment performs supervisory visits to disposal detachments and maintains coordination with supported units' rear area operations support centers. See FM 9-14 for further details.

f. Relationships with Other Headquarters.

(1) *With corps.* Corps headquarters issues mission type orders to COSCOM, together with necessary policies, priorities, and guidance for execution. Corps headquarters delegates to COSCOM responsibility for the conduct of combat service support and for preparing detailed combat service support plans affecting the corps as a whole. Upon approval of corps headquarters, such plans are issued in the name of the corps commander.

(2) *With supported divisions and nondivisional units.* The COSCOM is on an equal command level with divisions. It provides general support to divisions and separate brigades and direct and general support to nondivisional units. The COSCOM also provides backup direct support to divisions when required.

(3) *With corps engineer and signal units.* The COSCOM forwards construction, RPMA, and communications requirements to corps. Priorities established by corps for these requirements are the basis for mission orders to engineer and signal units in support of the COSCOM.

(4) *With corps military police unit.* Direct military police support to COSCOM elements in the corps rear area is provided by the corps military police unit. For military police support in the corps military police unit. For military police support in the corps area see FM 19-4 and FM 54-9.

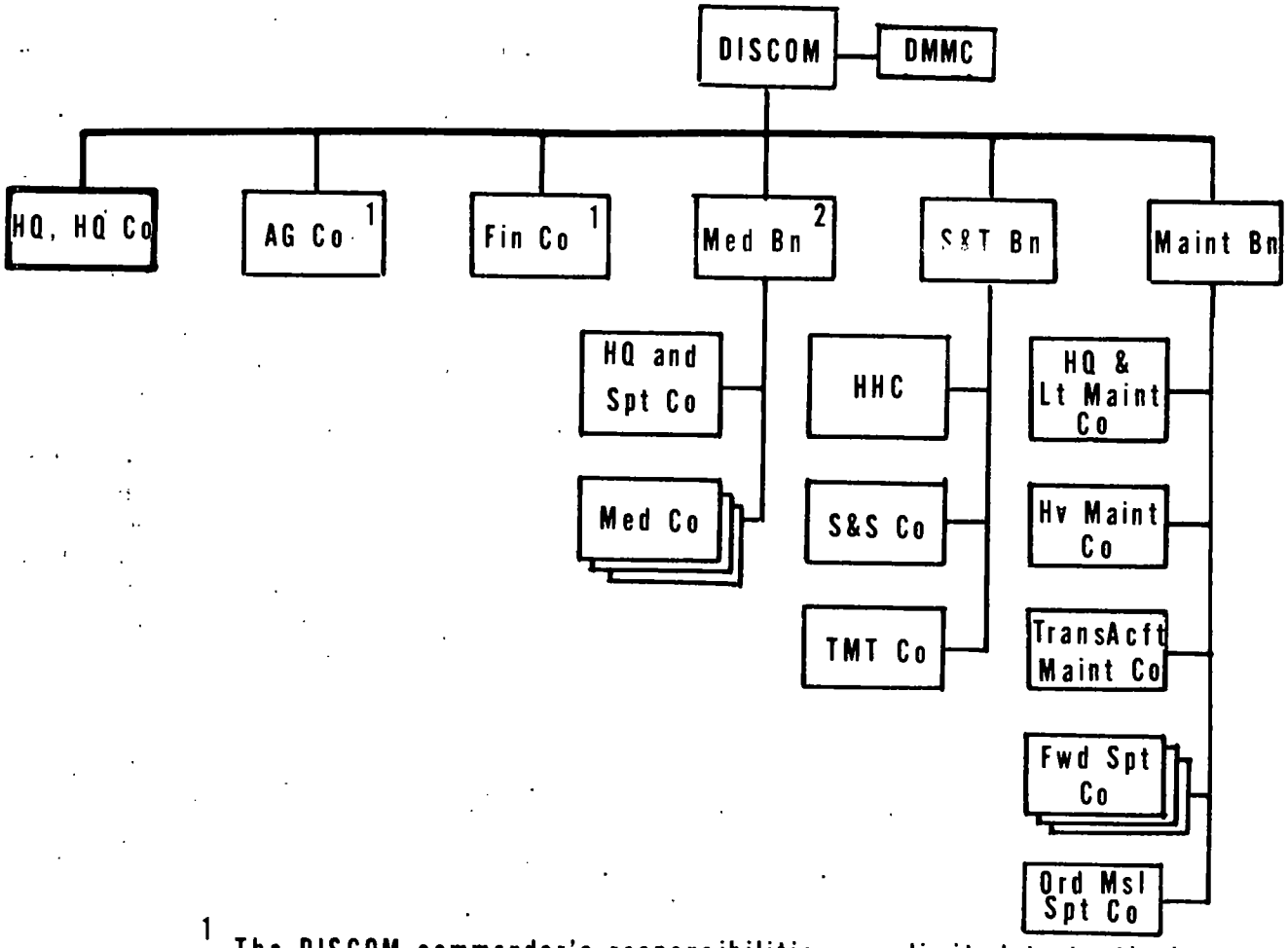
(5) *With theater army major functional and area commands and functional control centers.* The COSCOM maintains a close working relationship with theater army major functional and area commands and functional control centers. Functional control centers of the COSCOM may place requirements on their counterpart centers in the TA. Coordination of interzonal movements of replacements, units, and supplies requires placement of major functional command liaison personnel at critical control points in the corps.

(6) *With other services, other national forces, host nations, and host nation military organizations.* Within the policies of the corps, the COSCOM establishes and maintains necessary working relationships. The COSCOM uses the resources and capabilities of other US services and forces of other nations to provide combat service support to the corps. The COSCOM also may support these forces in furtherance of the corps mission.

3-20. Division

a. The division is the basic unit of the combined arms and services of the Army. It is the smallest unit in the Army in which all the arms and services are represented in sufficient strength to permit large-scale combat operations. Additional details on the division are contained in FM 61-100.

b. The division support command (DISCOM) usually deals directly with the support groups of the COSCOM on combat service support matters. The DISCOM also maintains a close relationship with the functional control centers (MMC and MCC). Figure 3-11 shows the organization of a DISCOM. Additional details on the DISCOM are contained in FM 54-2.



1 The DISCOM commander's responsibilities are limited to tactical, security, and movement aspects.

2 The DISCOM commander does not retain technical control of the medical battalion.

Figure 3-11. Organization of an armored, infantry, and mechanized infantry division support command (DISCOM).

CHAPTER 4

PLANNING

(STANAG 2079, SEASTAG 2079)

Section I. COMBAT SERVICE SUPPORT PLANNING

4-1. General

a. Close coordination among tactical planners and those planning combat support and combat service support is essential. Consideration must be given to all factors that can have a significant effect on the accomplishment of the operational mission. The availability of critical combat service support may decisively influence combat operations.

b. The concept of operations is the hub around which the tactical and supporting plans are developed. The concept serves to state the commander's intent relative to force deployment and support, and to describe the pattern of the operation as a whole. It provides guidance on the contributions to be expected from the combat, combat support, and combat service support elements for the accomplishment of the mission.

c. The principle of coordination amoung the combat, combat support, combat service support, and other planners necessarily extends to the DA Staff; DOD agencies and activities such as the Defense Supply Agency (DSA); other military services; The Surgeon General (TSG); General Services Administration; and major US Army Commands, all of whom provide support for Army forces. The product of these planning efforts is the development of a series of plans designed to integrate the support to Army forces for the time required to conduct the designated operation.

4-2. Enemy Nuclear, Biological, and Chemical Capabilities

Planners evaluate the impact of enemy capabilities for nuclear, biological, and chemical operations on the mission of the command. With the increased range and accuracy of delivery systems, no area in a theater of operations is free from the threat of attack. The commander determines the action he will take to avoid or reduce the effects of enemy weapons after he considers the mission of the command, the means available to accomplish the mission, and enemy capabilities. These factors directly influence the operation plan and layout of the combat service support areas. The objective is to reduce risks without producing inefficient operations and wasteful use of manpower and supplies.

Section II. TROOP PLANNING

4-3. General

a. Troop planning includes estimating personnel and equipment requirements to accomplish a mission based on tactical/strategic and logistic concepts and the intelligence estimate. Such planning normally conforms to the personnel strength ceiling authorized the theater and subordinate commands. Personnel and equipment are authorized for units in a command by The Army Authorization Documents System (TAADS) (AR 310-49), which also provides the means to maintain total authorizations in the command. This information, coupled with assigned and on-hand data, provides the centralized information needed for CSS troop planning.

b. A troop list is a listing of specific military units or individuals. A troop list usually contains the designation of each unit in a command's area or of each unit serviced by a command's automatic data processing unit. Such a list may include units located in an area but not assigned to the command, such as attached Allied units.

4-4. Principles of Troop Planning

The troop planner must continually analyze requirements. The following principles apply:

a. The force must meet its operational requirements.

b. The command structure must be sound.

c. The force must consist of the minimum essential manpower and equipment to accomplish the mission.

4-5. Combat Service Support Troop Requirements

Variable factors that influence combat service support troop requirements include—

a. Numbers and types of troops to be supported, their mission, and the extent of combat service support to be provided.

b. Quantity, types, and distribution of equipment.

c. Construction and RPMA requirements.

d. Climate and terrain.

e. Status of local resources in the area of operations.

f. Size of the area of operations.

g. Attitudes, availability, and capabilities of local civilians and prisoners of war.

h. Availability, capabilities, and limitations of combat service support units.

i. Enemy capabilities.

j. Needs of the inhabitants of the area which must be met from military stocks.

k. Patient evacuation policy.

4-6. Basic Steps in Troop Planning

The following steps are essential to sound troop planning:

a. Determining tasks and resources.

b. Determining workload.

c. Selecting types of units with required capabilities.

d. Calculating the number of units required, including type B units (para 13-6*c*).

e. Making provisions for command control.

f. Determining desired time-phased arrival of units at their destination.

g. Selection of specific troop units to fill the force requirements.

4-7. Troop Ceiling

Within the troop ceiling, planners coordinate troop requirements to achieve a balanced force that can perform the mission. Troop ceilings are fixed limits of troop strength to include authorized strength on manning documents, patient, transient, and temporary duty (TDY) spaces. Therefore, a change in the requirements of one agency requires adjustments among other agencies. When a change has been justified, as a result of detailed planning, the Department of the Army may change a troop ceiling.

4-8. Phases of Troop Planning

Troop planning normally takes place in three general phases, each considering the steps listed in paragraph 4-6 above but constrained by the availability of data. These phases are: estimation, calculation, and modification. The first phase is accomplished with few, if any, tangible figures. Each successive phase utilizes more accurate planning data until a balanced, sound troop list evolves. Fast moving warfare often requires merging various aspects of the three phases. FM 101-10-1 contains a description of the three phases.

4-9. Designing the Combat Service Support Structure

a. The company generally is the basic organizational unit for combat service support organizations. With few exceptions, there are no fixed organizations above this level. Normally, the company is self-sufficient in that it possesses the necessary organizationsl, administrative, and logistic capability. Companies can provide elements to support units for short periods of time. Cellular detachments and teams provide special capabilities when required and receive any organizational support necessary from the larger units to which they are assigned or attached. Units are organized to function, to the maximum degree, in either the combat zone or the communications zone. Headquarters units serve as command and control elements for assigned and attached units that are selected in the required number and with the necessary capabilities to best meet the operational situation.

b. Flexibility in combat service support organizations is essential to meet the full range of tasks that may arise. Using the company as the basic unit, the troop planner designs the combat service support structure to accomplish the support mission in the most efficient and responsive manner. Use a company-sized units in this manner is known as the "building block" principle and is a fundamental technique in developing combat service support organizations.

c. An important application that illustrates the building block principle is found in the COSCOM. COSCOM operations, organization, and capabilities are the composite of the combat service support activities performed by the separately organized table of organization and equipment (TOE) units that may be assigned or attached. In general, each of the various headquarters, companies, detachments, and cellular organizations is designed to perform a given workload in specific areas of combat service support. These separate units, with proper adjustment to insure self-sufficiency, can be used to support organizations of less than division size. Battalion, group, and brigade headquarters are added when the combat service support structure expands.

d. When a change is experienced in composition or terrian alignment of units supported, a corresponding change shall be made in the combat service support organization using the foregoing principles. The buliding block principle represents the general approach to be used by the troop planner in developing any combat service support troop list.

4-10. Changes in Troop Lists

An organization designed to meet specific

requirements often needs modification as operations progress or as plans further develop. It may become necessary to add new units and delete old ones, or units may require additional personnel and equipment. Such requirements dictate the submission of modification tables of organization and equipment (MTOE) and modification tables of distribution and allowances (MTDA) through command channels (AR 310-49).

Section III. BASE DEVELOPMENT PLANNING

4-11. General

a. The commander of a unified, joint, or specified command is assigned the mission of planning and executing miliatry operations in consonance with national strategic objectives. He prepares operations plans (OPLAN) in accordance with policy guidance and mission directives issued by the Joint Chiefs of Staff and the procedures and formats of the Joint Operations Planning System (JOPS). An essential element of the OPLAN is the base development plan (BDP) which is prepared as an appendix to the logistics annex. The BDP is developed concurrently by the unified command and the component commanders. The BDP becomes the governing instrument for base development in support of the OPLAN.

b. The base development plan is defined in FM 31-82 as, " . . . the product of concurrent planning by the commander of a joint command and the commanders of the component Services accomplished in accordance with the planning directive. It is the governing instrument for planning and establishing a base. The plan is a compilation and extraction of all the information necessary for the theater commander and his staff to coordinate the effects of subordinate commands in base development. It provides specific terms of direction and includes all phases of concurrent planning undertaken by the subordinate commands concerned. The base development plan sets forth base facilities to be provided and the combat service support functions to be performed. It covers such matters as standards of construction, priorities, and restrictions on the use of critical materials."

c. The theater commander may have his staff prepare the entire BDP, however, he normally will assign responsibility for preparation and execution of the plan to one of his subordinate component commanders. Gererally the theater army commander, as commander of land forces, will have a predominant interest in base development and will usually be tasked to prepare the plan. In either event command responsibility for the BDP remains with the theater commander because he is the individual who must provide the Joint Chiefs of Staff with the complete OPLAN.

d. The purpose of base development planning is to determine facility requirements to support operations in an actual or potential area of operations; to identify the facilities that are available and what resources are required to eliminate deficiencies; and to establish a program for providing the required facilities and operating personnel to support the mission.

e. Base development planning is accomplished in conjunction with operational planning, each influencing the other. In long range planning, combat service support requirements may necessitate the acquistion of base areas overseas to insure support of initial deployment of combat forces and to provide facilities for stockpiling supplies to support initial combat operations. Success or failure in acquiring rights to oversea bases may influence operational plans.

f. United States forces may be part of a combined command under plans that the combined staff of the standing treaty organization prepares. Base development plans must consider the combined plan, as well as agreements regarding combat service support of or by Allied forces. It must also consider the resources and support capabilities of Allied nations in whose territory operations may be conducted.

g. Base development in an area of operations may start prior to or concurrent with the initiation of combat operations. Prior to the initiation of combat operations, development of the base may begin in anticipation of hostilities and the requirement to deploy combat forces. Necessary actions in conjunction with base development include prepositioning required supplies and the deployment of combat service support forces in sufficient numbers to maintain stocks and support the initial deployment of combat forces.

h. The base development plan, when approved—

(1) Informs all concerned of the commander's standards of construction of the base.

(2) Schedules, in order of priority, the construction of base facilities and provides a basis for determining the number, kind, and dates of arrival of troops to construct and operate installations in the base.

(3) Provides a basis for theater supply agencies to requisition and ship supplies, equipment, and troops in the proper amount. To assist in this effort the Army Facilities Component System (AFCS) was developed (para 13-2*e*).

(4) Establishes operational dates for such key facilities as communications centers, depots, hospitals, airfields, water terminals, etc.

4-12. Planning Procedures

Detailed base development planning procedures and a format for a base development plan are contained in FM 31-82.

Section IV. REAR AREA PROTECTION PLANNING

4-13. General

a. The rear area is the geographic space within a command where the bulk of combat service support functions are preformed. In the corps it is the area behind the division rear boundary. The rear areas normally are—the division rear, corps rear area, and the Commz.

b. Rear area protection (RAP) includes rear area security and area damage control. Integration of these activities under a single concept of coordinated employment maximizes the capability of combat support and combat service support elements to respond to emergency RAP missions without excessive degradation of individual unit operations. The basic philosophy of RAP is to employ RAP designated elements of combat support and combat service support units within a given geographical area to counter enemy actions or the effects of a natural disaster.

c. RAP measures include those actions to prevent, neutralize, or defeat enemy attacks on units, activities, and installations in regard to rear area security. Area damage control responses include those measures taken before, during, and after hostile actions or natural or manmade disasters to reduce the probability of damage and the minimize its effects. By employing the RAP principles of integrated and graduated response, commanders charged with RAP responsibilities can minimize interruption to support operations by taking only those units necessary to provide the RAP forces required to alleviate indiviaual or multiple threats.

d. The commander exercising area control is responsible for protecting units, activities, and installations in his area. It is imperative that command structuring provide for unity of command and simplicity of operation. To assist him in RAP command and control, a rear area operations support center is assigned to provide the planning capability and command and control element for forces designated to executre RAP missions when committed. This center assists subordinate units in developing RAP plans and potential.

4-14. Planning Considerations

a. Problems in RAP generally develop as tactical forces advance, leaving large unprotected areas which threaten the security of support units remaining in the vicinity. Upon completion of combat operations in any given area, enemy organizations may be formed to threaten support activities. The execution of RAP missions demands that planning be aimed at countering the worst possible threat. The density and mobility of troops forward of the corps rear area generally preclude the opportunity for extensive enemy guerrilla or partisan activities. Thus, the primary attempt for irregular decisive results may be expected farther to the rear; the possibility of an attempt increases as lines of communication are extended and friendly troop density is lessened. It might also be expected that with the increased mobility of conventional forces and their ability to conduct deep airmobile and airborne penetrations, the number of enemy conventional forces operating deep on friendly rear areas will increase. The following precepts should guide all RAP plans:

(1) Plans must be kept as simple and as general as possible.

(2) Only the minimum number of plans should exist; a voluminous number of plans creates delay and confusion.

(3) Plans should be oriented toward the most effective utilization of support units. Employment for RAP purposes is a responsibility of the designated area commander.

(4) Plans must consider personel and equipment authorizations under TAADS and actual resources available. The effectiveness of RAP units is influenced significantly by current troop strength and equipment availability.

b. Area commanders plan for the employment of tactical resources when the effect of enemy rear area activities is beyond the limited capabiliteis of available RAP resources.

4-15. Planning Sequence

a. The first RAP action is to determine the threat and plan local security measures. Of paramount importance is to plan for the security of newly established bases. The problem can be somewhat alleviated by augmenting military capabilities with local or indigenous security forces such as police or local militia. Additionally, police and security forces of a country by their very nature provide an intelligence source stemming from all levels and orders of the society. Their daily contacts and observations coupled with an extensive knowledge of the area of operations provide an important sources of intelligence for RAP planning. However, it must be recognized that this increases the possiblitiy of infiltration within support activities and that proper precautions and security checks are essential.

b. The next step is to select a unit position that is compatible with both local defense and operational requirements. Supporting units need a good road net, ready source of labor, storage area space, and other facilities which are available in established commercial areas. Such placement, however, may provide the enemy with increased opportunities for attack and destruction by ground or air, by conventional or nuclear means. The commander should evaluate the above requirements with security considerations, such as occupation of high ground, cover, observation, concealment, availability of fields of fire, and avenues of approach. Based on his evaluation, he then should select the location most appropriate for unit security and mission accomplishment.

c. Prior to occupying a site, a review is made of all available intelligence about the general area. The military intelligence (MI) group(s), counterintelligence (CI), and the ASA group assigned on the basis of one per TAACOM provides that intelligence and counterintelligence support which is beyond the organic capability of the TA functional commands. For further information regarding the MI group, CI, refer to FM 30-9 and to FM 32-10 for the ASA group. Intelligence is also developed by unit intelligence staff officers through such sources as indigenous engineers, cross-country trafficability studies, topographical maps, local police, and Allied forces.

d. The continuous monitoring of plans is essential so that operational adjustments based on experience can be incorporated. If support requirements dictate the occupation of a high-risk area, the responsible commander should select an acceptable, alternate site and make every effort to phase into it as operations permit. Prolonged occupation of a site makes subsequent relocation extremely difficult.

4-16. Planning Responsibilities

a. Rear Area Operations Center.

(1) The rear area operations center (RAOC) is a group of functionally oriented personnel trained and equipped to keep the area commander continuously informed of the situation in his area and of the resources available to meet emergencies. A major problem in rear area protection planning is the building of a reaction or security task force, since combat service support units can seldom jeopardize their primary mission to fill this new role. The local RAOC commander must continually monitor and maintain up-to-date information on tenant and transient units with emphasis on indentification of their resources and capabilities for RAP potential. Each unit move, each change in priority or potential, and each emergency precipitates the need for updating and reevaluating the RAP plan and operations order. Once the total area potential is determined and confirmed by coordination, the RAOC develops RAP companies or other suitable elements and organizes them into the overall RAP task force. This organization has RAP planning responsibilities and may provide command and control over forces created to handle RAP problems.

(2) In the combat zone, the COSCOM commander is responsible for RAP throughout the corps rear area. This responsiblity is accomplished through ROAC assigned to each support group. The corps rear area is divided into a number of subareas with a subarea controller responsible for RAP within each subarea. When enemy operations warrant, separate boundaries are established for rear area security to coordinate tactical operations against enemy forces. Normally, support group commanders are appointed subarea controllers.

(3) In the TAACOM, a RAOC is assigned to each area support group (ASG) and operates directly under the commander. Each ROAC is located geographically where it can best accomplish the RAP mission for the respective area of responsibility. The RAOC also coordinates the employment of chemical agents within the capabilities of the RAP force.

b. Detailed planning responsibilities for rear area protection are contained in FM 31-85.

CHAPTER 5

COMMUNICATIONS

(STANAG 2043, SEASTAG 2043)

Section I. GENERAL

5-1. Basic Considerations

a. A responsibility of command is to provide communications. Communications and military operations are integral and inseparable. The provision and maintenance of communications provide for the effective use of military forces.

b. Communications must be reliable, rapid, and secure.

c. Each commander is responsible for the operation of the communcations system of his command and for its efficient operation as part of the integrated communications network.

d. The various communications systems established in a theater of operations are integrated. Except ar tactical considerations dictate, services or commands should not duplicate communications systems. When appropriate, a portion of the communications requirements of a command will be met by Defense Communication Agency (DCA) allocation of communications channels in the systems of another command or service.

e. Various headquarters or installations in the communications zone have organic communications elements capable of furnishing their internal communications.

5-2. Theater Responsibilities

a. The theater commander provides for adequate communications to and between component services and joint forces of his command. The organizational structure of the theater determines the form and extent of the theater communications systems. The joint and uniservice responsibilities for communications in a theater of operations are indicated in chapter III, JCS Pub 2.

b. The theater commander, through his assistant chief of staff, communications-electronics (ACSC-E), insures the integration of theater communications facilities and the correlation of operating procedures.

Section II. THEATER ARMY COMMUNICATIONS

5-3. Theater Army Responsibilities

a. The theater army commander provides communications service to Army elements and to other services and agencies as directed. The theater army assistant chief of staff, communications-electronics, plans and supervises the formulation and implementation of signal plans, policies, and procedures for installation, maintenance, operation, and management of Army communications services in the theater.

b. In the combat zone, signal elements assigned to the corps provide an internal communications system linking the corps headquarters with its major subordinate elements. They also provide an area communications system for support of those assigned, attached, and supporting units having no organic communications capability. In the COMMZ, communications services are established and provided by the theater army communications command, which also provides communications to, but not within the corps.

5-4. The Theater Army Communications Command

a. The theater army communications command (TACCOM) will install and operate the theater army communications system (TACS). The basis of allocation of this command is one per theater army. The TACCOM commander also serves as the theater army communications-electronics staff officer. The TACCOM provides internal communications for headquarters and installations in the COMMZ that do not have organic communications elements.

b. The theater army commander uses TACS to support US Army forces in the COMMZ; and to interconnect with tactical communications systems forward of corps rear boundaries.

5-5. Communications Security

a. It must be assumed that the enemy has the capability to intercept all signal communications. The analysis of such intercept can result in two types of exploitation by the enemy. On one hand, he can study the usage patterns, technical characteristics, and message content to derive communications intelligence (COMINT) concerning combat service support activities. This information, valuable in itself, also provides significant insights into the plan and activities of friendly forces as a whole. On the other hand, the enemy can use this intercepted signal to provide him with electronic warfare support measures (ESM); that is, the technical data base required for conducting electronic counter-measures activities. Disruption or denial of combat service support communications can seriously impair the activities of friendly forces.

b. Communications security is the protection resulting from all measures designed to deny unauthorized persons information of value which might be derived from the possession and study of telecommunication, or to mislead such persons in their interpretations of the results of such telecommunication, or to insure the authenticity of such telecommunications. Included in COMSEC are cryptosecurity, transmission security, emission security and physical security of COMSEC materiels and information. For details see FM 32-5.

c. Communications security is of vital importance at all levels in order to minimize the amount of intelligence that the enemy can derive through his COMINT activities as well as to minimize the amount of technical information derived through his EW operations. For this reason, personnel involved with signal communications, whether as a primary duty or on an occasional basis, must be thoroughly trained and indoctrinated in approved radiotelephone COMSEC and electronic warfare (EW) procedures. The organizations that provide COMSEC logistics support are discussed in paragraph 3-13*b*. For electronic warfare details see FM 32-20.

d. Because of the enemy COMINT and EW capabilities, both short and long term disruption of communications between the materiel management centers must be anticipated. Plans must be developed to counter these communications disruptions to insure uninterrupted materiel support to the operating forces. The techniques of emergency resupply, programmed resupply, reaction only to high priority requisitions, and decentralization of the materiel management effort to support battalion level should all be considered.

CHAPTER 6

CIVIL AFFAIRS

Section I. INTRODUCTION

6-1. General

a. Civil affairs (CA) is a command responsibility and involves the relationship between the military commander and his forces, and the civil authorities and people of a foreign country when military forces are present. Civil affairs operations include advisory assistance, liaison, support to the US commander, and support to government and domestic support operations.

b. The primary objective of CA operations is to support military operations by providing a bridge between the civil population and military forces. Such action minimizes interference by the civil population in the military mission, while gaining maximum local support for the campaign. Psychological operations play an important role in attaining this objective. Other objectives include the furtherance of US national policies; the fulfillment of treaty obligations and those obligations that arise from agreements and policies; reducing the logistic burden on US forces by the reestablishment of civilian institutions; and the identification of resources that can be made available to the commander.

c. The administration of CA is on a functional basis, with sufficient flexibility to fit the special requirements of any area or situation. Included in the areas of specialization are those functions normally related to government, economics, public facilities, and special functions as delineated in FM 41-10.

d. The nature of CA operations varies with the type of warfare, the requirements of the tactical commander, and the attitudes and status of the population in the area of responsibility. In limited and general war, CA operations normally support the tactical commander. In stability operations, the CA role may take on added importance because the ultimate objective is to gain the support of the populace for its government. Civil affairs input, with emphasis on execution, must be part of the planning for every military operation. Military planners consider the inherent capability of every Army unit to conduct limited CA operations. Planning should provide for the employment of CA specialists and units to augment and support this inherent unit capability.

6-2. Civil Affairs Authority and Responsibilities

a. In JCS Pub 2 are set forth the authority and responsibilities of the US Department of State, the Department of Defense, and other government departments concerning CA. In the NATO area, the term civil affairs has been replaced with the term Civil Military Cooperation/Civil Military Relations (CIMIC/CIMIR). See JCS Pub 1 for specific definition.

b. A military commander's CA authority depends on the military mission and the relationship of the government concerned to the United States. The authority the commander exercises conforms to US national policy, the law of land warfare, treaties, and international agreements. The authority to establish the military government phase of CA arises from the international laws of war, which give the occupying power certain rights and responsibilities.

c. Each commander of a unit of the US Armed Forces is responsible for—

(1) Complying with the laws of the United States, international law including customary law, the various treaties and agreements to which the United States is a signatory, and to those laws of the country concerned that do not conflict with US or international law.

(2) Performing such missions in the field of CA as he may be directed.

(3) Using appropriate CA units and personnel, except as otherwise directed, to secure necessary assistance, supplies, and facilities from local sources and to deal with local civilians and governments on behalf of the US Armed Forces.

Section II. COMMAND AND STAFF RELATIONSHIPS

6-3. General

a. Theaters of operations in most cases employ joint or combined organizational structures. Control and coordination of CA matters are at the highest level consistent with military requirements. Details of the CA units, organization and employment are contained in FM 41-10.

b. When US diplomatic representatives are in the area, Executive orders usually delineate the relationships between the theater commander and the diplomatic representatives.

c. When US diplomatic representatives are not in the area, the senior US military commander normally has authority, within US national policy, as outlined in paragraph 6-4.

6-4. Theater (US Forces)

When directed, the theater commander advises and assists or exercises a specified degree of control over civil populations, their governments, economies, and institutions. In the conduct of CA activities, the theater commander—

a. Plans for and conducts CA operations in accordance with guidance, policies, plans, and operational instructions of the Joint Chiefs of Staff.

b. Secures CA units and personnel required to execute his plan in the same manner that he secures other forces.

c. As required, obtains a political adviser for his staff from the US Department of State to advise on implementation of established policy and to provide liaison with the US Department of State.

d. May delegate authority for CA matters to one of the service commanders in the area, unless he elects or is directed to retain his authority.

CHAPTER 7

INTELLIGENCE

(STANAG 2084, SEASTAG 2084)

7-1. General

Military intelligence and Army Security Agency (ASA) support are provided the theater of operations by military intelligence organizations assigned to the theater army and the corps. The type and quantity of MI support required is contingent on the mission, employment and assigned geographical areas of responsibility of the supported units.

7-2. Intelligence Support

a. The military intelligence organizations assigned to theater army and corps provide intelligence support to the intelligence staff sections of supported units. Intelligence support includes functional support in areas of combat intelligence, counterintelligence, collection, imagery interpretation, technical intelligence, and interrogation while ASA personnel perform functions concerned with SIGINT, SIGSEC, and electronic warfare (EW).

b. Engineer intelligence support can also be provided by the ENCOM using assigned topographic units and information gathered by engineer units throughout the theater.

7-3. Military Intelligence Organization at Theater Army

The MI unit at theater army is organized to provide military intelligence support to the theater army headquarters and the TAACOM headquarters as required. Figure 7-1 shows the organization of the current MI unit at theater army. Those units that normally comprise the theater support organization are discussed in *a* through *g* below:

a. The headquarters and headquarters company provides the normal command, control, and support personnel in the employment of operational elements of the unit.

b. The theater army headquarters staff support section may contain specialists for strategic intelligence, order-of-battle production, censorship, intelligence collection, counterintelligence, and technical intelligence. These personnel operate in the theater army G2 staff section.

c. The imagery interpretation detachment processes imagery provided the G2 by the tactical air force (TAF). This detachment is normally near theater army headquarters, but it may be located at reconnaissance airfields. Theater army normally uses the imagery interpretation reports prepared by this detachment in long range plans and studies.

d. Interrogation detachments from the interrogation company are located, as required, at PW internment facilities in the COMMZ and provide reports on selected PW in response to specific requirements levied by the theater army G2. The corps G2 may also request interrogation of selected PW found to be knowledgeable in matters pertaining to the corps after evacuation from the corps area.

e. The technical intelligence (TI) company provides examination, analysis, and reports on enemy materiel collected and evacuated by tactical units to designated collection points. To perform its mission, this company must have access to photographic, signal, and light armored vehicle maintenance facilities. The company also operates as control center for a coordinated TI program within TA.

f. The counterintelligence detachment provides counter-intelligence support in support of TA or a combined/unified command.

g. The MI battalion, collection, fulfills special theater army intelligence requirements that cannot be obtained through other collection means. It augments the effort of the MI company, collection, organic to the corps MI unit.

h. The relationship of the theater army MI unit with other theater army and component commands is described in (1) and (2) below.

(1) The theater army MI unit operates in direct support of theater army headquarters and in general support of the MI units assigned to the corps. If the theater commander establishes joint intelligence facilities, the theater army MI unit can provide intelligence support to the Army element of such joint facilities.

(2) The theater army MI unit coordinates closely with comparable intelligence units of component commands to provide for timely exchange of intelligence information, consolidation of appropriate operations, and elimination of conflicts and duplication. The MI unit at theater army, exchanges liaison personnel with the MI units in the corps to insure close coordination of operations and to permit

orderly transfer of counterintelligence operational cases.

7-4. USASA Organization at Theater Army

Figure 7-2 reflects a type USASA group organization. Specific organization, functions, and capabilities are covered in FM 32-10.

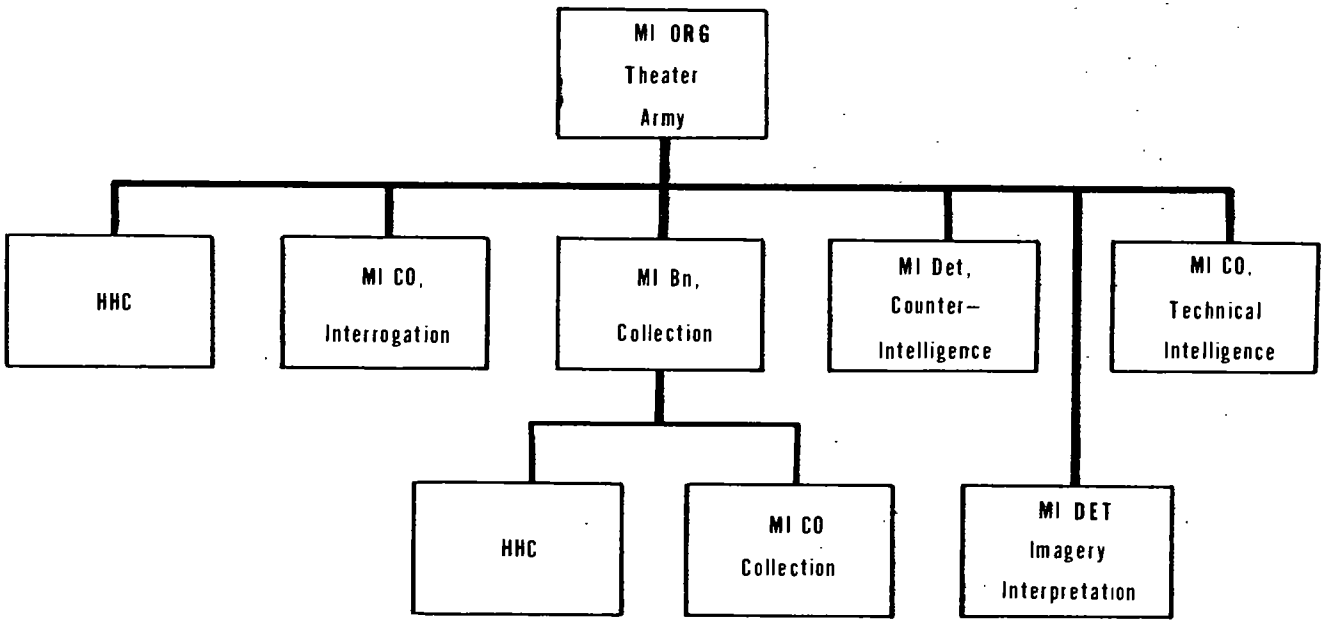


Figure 7-1. Typical military intelligence organization, theater army.

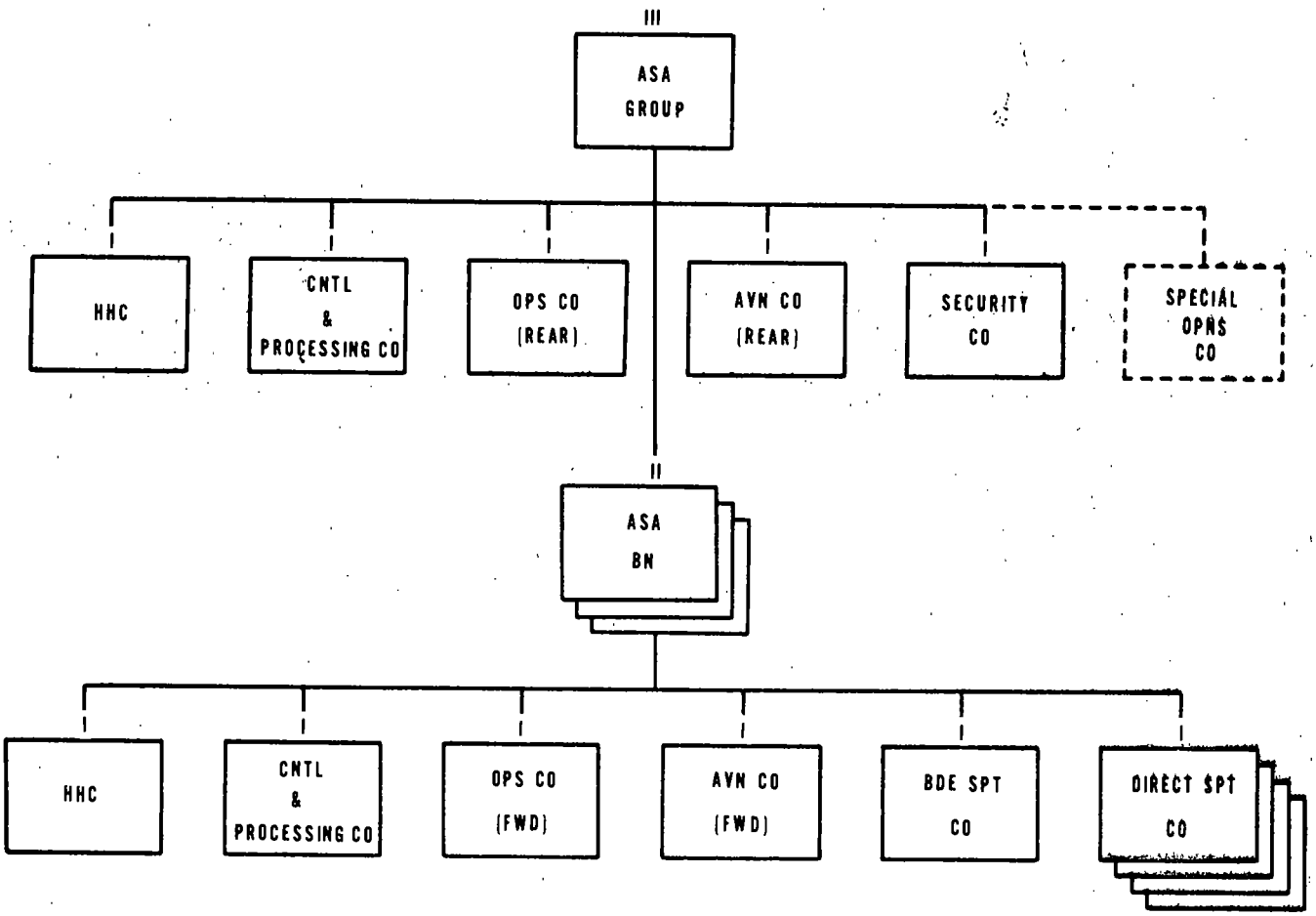


Figure 7-2. Type USASA group organization.

PART TWO

LOGISTICS

CHAPTER 8

LOGISTICS-GENERAL

(STANAG 2135)

8-1. General

a. The objective of logistics support is the timely provision of required supplies and services to all elements with a minimum expenditure of manpower and dollar resources. In order to continue to attain this objective, the Army is implementing a Standard Army Logistics System (SALS) that will provide for compatible wholesale, Army-in-the-field, and CONUS installation logistic systems utilizing ADPE to the maximum extent feasible. The SALS, when complete, will encompass all major logistics functional systems (supply, maintenance, transportation, facilities, and services) for each echelon of the Army. Also in furtherence of this objective, the Direct Support System (DSS), with the exception of supply classes I, III (bulk), and V, is becoming the basic supply/distribution system for the Army. This concept of reducing the role of intermediate echelons in the supply distribution system minimizes the layering of stocks and emphasizes direct support from CONUS to the user whenever feasible. See Chapter 9 for further details.

b. Logistics is the science of planning and carrying out the movement and maintenance of forces and equipment. In its most comprehensive sense, the logistic aspect of military operations deals with—

(1) Design and development, acquisition, classification, storage, movement, distribution, maintenance, evacuation, and disposition of materiel.

(2) Movement, evacuation, and hospitalization of personnel.

(3) Acquisition or construction, maintenance, operation, and disposition of facilities.

(4) Acquisition or furnishing of services.

c. Logistic functions in theaters of operations include supply, maintenance, transportation, construction, and other services.

d. General principles governing establishment and operation of the logistic system in theaters of operations include—

(1) Minimum number of items on the theater authorized stockage lists and prescribed load lists. Maximum reliance on CONUS supply activities for routine and noncritical supply requirements.

(2) Routine use of economic airlift.

(3) Intensive management of inventory and transportation movements.

(4) Minimum handling of supplies.

(5) Minimum supply, maintenance, transportation, and service installations and units.

(6) Maximum dispersion of logistic installations and units consistent with the tactical situation, logistic support requirements, control, and security.

(7) Maximum use of existing facilities, local supplies and utilities, captured materiel, civilian personnel, and prisoners of war (when allowable under the terms of the Geneva Conventions).

(8) Maximum economy of resources.

(9) Maximum use of alternate routes.

(10) Optimum use of mobile maintenance teams.

8-2. Logistic Readiness

Logistic readiness is a condition that exists when a unit or activity has sufficient logistic associated assets readily available to insure mission accomplishment. It is the ability to plan for and to promptly and efficiently carry out the movement and maintenance of forces. Commanders at all echelons will assign specific staff responsibility for coordination and supervision of logistic readiness functions to a senior individual or the chief of a staff element of a command (AR 11-14). Normally, the deputy commander will have the delegated authority and a logistic readiness officer (LRO) will execute the logistic readiness program within TA. He coordinates information, advice, assistance, liaison, guidance, training, instructions, directives, and inspections related to logistic readiness. He may also arrange for or provide personnel to perform as logistic readiness expediters to assist in overcoming

temporary logistic readiness problems, particularly problems concerned with the logistic readiness of the supported force. In all logistic readiness actions, the LRO coordinates closely with the other elements of the staff, particularly with the ACofS, materiel. LRO also are found in the TAACOM, area support groups (ASG), and COSCOM.

8-3. Logistic Support of Combat Operations

The battlefield will probably be the scene of highly fluid combat operations that could present extraordinary logistic problems. Such operations, combined with use of mass-destruction weapons, will require increased emphasis on one or more of the following procedures:

a. Maximizing use of all transportation assets.

b. Reducing the allocation of supplies for some forces to insure an adequate supply for forces engaged in more crucial operations.

c. Diverting logistic units from low-priority tasks to support the main effort.

d. Positioning supplies to support detached or withdrawing forces.

e. Regulating and controlling movement of supplies and troops across major obstacles.

f. Providing increased security for logistic installations and lines of communications.

g. Rapid movement of supplies.

h. Redistributing uncontaminated supplies and equipment promptly—particularly vehicles—of ineffective units.

i. Using local resources to the maximum permitted by the laws of land warfare.

j. Establishing priorities to insure availability of transportation for the most urgent requirements.

8-4. Logistic Support of Special Operations

Operations in mountains, jungles, deserts, snow, and extreme cold, and airborne, airmobile, amphibious, and riverine operations may require modification of normal logistic procedures. The procurement of specialized equipment to support these special-type operations may involve long leadtimes, which, in turn, create a requirement for long range estimates and expedited processing. When necessary, major commanders may request operational projects (AR 725-65) for stockage of supplies and materiel in the theater or CONUS for the purpose of supporting specific operations, contingencies, or war plans for a specific geographic area (para 9-17).

a. Operations in jungles, snow, and extreme cold require specialized equipment and modification of normal distribution, storage, and evacuation procedures because of extreme weather effects and restricted lines of communication. Operations in mountains may rely heavily, or altogether, on aircraft, men, and animals for transportation. Environmental effects on personnel and equipment emphasize and increase the difficulties of performing maintenance.

b. Desert operations present problems in water supply. The accumulation of sand in equipment hampers operations and, together with wide daily temperature ranges, creates unusual supply and maintenance problems.

c. Amphibious operations require close Army, Navy, and Air Force coordination in establishing and maintaining logistic support of forces ashore (FM 31-11 and FM 31-12).

d. In airborne operations, airborne force commanders are responsible for logistic support that accompanies assault forces. The TAACOM assists in mounting an airborne operation and provides logistic support during the operation, including followup supply. Normally, this initial support is provided by the area support group of TAACOM in whose area the marshaling site for the airborne operation is located. To accomplish this support, the area support group must be augmented to provide an airdrop capability, communications between the marshaling site and appropriate elements of the area support group, medical support for the operation, and direct support ammunition supply for the airborne force. The area support group delivers supplies to airfields for Air Force delivery to forces in objective areas. After surface linkup, normal supply procedures are applicable (FM 57-1 and FM 61-100).

e. Airmobile operations require detailed logistic planning. Planners give special consideration to the numbers and types of aircraft available for supply missions as well as to the stocks of fuel and ammunition needed for resupply.

f. In riverine operations, the established principles of combat service support for the major combat units (divisions and corps) are applicable. With some variations, the logistic techniques, procedures, and organizational concepts governing support of ground and airmobile operations also apply. The basic peculiarity of riverine operations is the extensive use of ships and watercraft for all types of logistic support. Combat service support of a riverine operation is primarily support of land and afloat bases and support of operations launched from these bases. Contained in FM 31-75 are details on riverine operations, including combat service support. Paragraph 11-18 discusses the use of inland waterways for transportation.

8-5. Logistical Support in Unconventional Warfare and Stability Operations

a. Unconventional Warfare. Unconventional warfare (UW) includes the three interrelated fields of

guerrilla warfare, evasion and escape, and subversion. Unconventional warfare operations are conducted within enemy or enemy-controlled territory by predominantly indigenous personnel, usually supported and directed in varying degrees by an external source.

b. Stability Operations. Stability operations are those types of internal defense and internal development operations and assistance provided by the armed forces to maintain, restore, or establish a climate of order within which responsible government can function effectively and without which progress cannot be achieved.

c. Logistic Responsibilities. Logistic support of UW and stability operations is the responsibility of the Joint Unconventional Warfare Task Force (JUWTF) or theater commander. Each component service will be tasked to provide appropriate support to the forces involved. This support will be provided under control of the joint command and the military assistance advisory group (MAAG) when assigned to that country. In general, such support will be provided to the indigenous forces under the Military Assistance Program or similar apparatus with US forces receiving support from the theater logistical system.

d. Logistic Support. Support of the assigned mission is the basic consideration in planning and organizing logistic support of stability operations. Support requirements may range from those necessitated by a variety of combat situations involving either US or Allied forces or both; to those involving training in the conduct of military civic action programs. Combat service support units are well suited to support these operations by providing such humane and civil relief services as restoring public works and furnishing food, clothing, and medical treatment. When such support is required, and when the necessary units and supplies are available, assistance of this type facilitates accomplishment of the stability operation mission. The supporting procurement organization will provide responsive procurement support for non-standard items through the procurement of commercial items. However, the combat service support system normally provides adequate support for all types of stability operations. The techniques for logistic support in areas separated from organic combat service support units may vary considerably from those used in areas having such support units. These principles and techniques for support are applicable to both US and indigenous forces. Flexibility, responsiveness, and improvisation are key factors and can be accomplished by—

(1) Planning in advance so that units have the minimum essential supplies and equipment consistent with contemplated operations. This is particularly important for operations in remote areas and where adverse weather and climatic conditions are prevalent.

(2) Stocking supplies at echelons below those at which stockage is normally maintained to expedite supply (e.g., at brigade, regimental, or group bases of operations in readily accessible areas and at battalion bases of operations in remote areas).

(3) Making forces assigned to stability operations as self-sufficient as practicable. Payment for food, supplies, equipment, materials, and facilities requisitioned locally for military use avoids undesirable psychological effects. In areas where food or other supplies are scarce, local purchase or requisition should be prohibited.

(4) Accomplishing logistic support by air or water when land transportation cannot provide timely support.

e. Host Country Organization.

(1) In many countries, particularly those receiving assistance under the Military Assistance Program, the host country army combat service support system will probably be similar to that of the US Army. In many cases, host country combat service support activities follow the same regulations and procedures as the US Army. US Army personnel trained and experienced in Army supply concepts and doctrine advise host country forces while many host country key logistic personnel have studied at Army installations and schools in the United States. Such system similarity acts to increase the effectiveness of US Army combat service support for host country forces, as well as for US forces. Even so, it is not the task of the Army elements to change the host country combat service support system to conform with that used by the United States. Rather, the task is to help host country forces make their system operate as efficiently and effectively as possible.

(2) Organizational and geographic decentralization of combat service support for military units committed against insurgent forces may be the normal supply procedure in stability operations. The deployment of the command and its organization for combat will usually dictate modification of normal combat service support structures and procedures to provide effective support of combat operations.

f. Additional Information. Details concerning logistic support of UW operations may be found in FM 31-21.

CHAPTER 9

LOGISTICS—SUPPLY

(STANAG 2034, SEASTAG 2034)

Section I. GENERAL

9-1. Introduction

a. Supplies are the commodities necessary to equip, maintain, and operate a military command. The Army, Air Force, and Marine Corps divide supplies into general classes for planning and administrative purposes. These classes of supplies are as follows:

(1) Class I—Subsistence including gratuitous health and welfare items.

(2) Class II—Clothing, individual equipment, tentage, tool sets and tool kits, handtools, administrative and housekeeping supplies and equipment. Includes items of equipment, other than principal items, prescribed in authorization/allowance tables and items of supply (not including repair parts.)

(3) Class III—POL: Petroleum fuels: lubricants, hydraulic and insulating oils, preservatives, liquid and compressed gases, chemical products, coolants, deicing and antifreeze compounds, together with components and additives of such products and coal.

(4) Class IV—Construction: Construction materials to include installed equipment and all fortification/barrier materials.

(5) Class V—Ammunition: Ammunition of all types (including chemical, radiological and special weapons), bombs, explosives, and mines, fuses, detonators, pyrotechnics, missiles, rockets, propellants, and other associated items.

(6) Class VI—Personal Demand Items (nonmilitary sales items).

(7) Class VII—Major End Items: A final combination of end products which is ready for its intended use; (principal item) e.g., launchers, tanks, mobile machine shops, vehicles.

(8) Class VIII—Medical material including medical peculiar repair parts.

(9) Class IX—Repair parts and components to include kits, assemblies and subassemblies, reparable and nonreparable required for maintenance support of all equipment.

(10) Class X—Materiel to support nonmilitary programs; e.g., agriculture and economic development not included in classes I through IX.

b. Additional details are contained in AR 11-8, FM 10-13, and FM 38-24.

9-2. Basic Supply Terminology

Figure 9-1 illustrates terms used in the planning and control of supply. The terms are defined or explained in *a* through *h* below.

a. Level of Supply. A general supply term used for planning purposes and in the control of supply operations for expressing quantities of supplies or materiel authorized or directed to be held in anticipation of future demands. Levels may be expressed in days of supply or in quantity per item.

b. Operating Level of Supply. The quantities of materiel required to sustain operations in the interval between the arrival of successive shipments.

c. Safety Level of Supply. The quantity of materiel, in addition to the operating level of supply, required to be on hand to permit continuing operations in the event of minor interruption of normal replenishment or unpredictable fluctuations in demand.

d. Order and Shipping Time. The time elapsing between the initiation of stock replenishment action (preparation of requisition) for a specific activity and the receipt and recording by that activity of the materiel ordered.

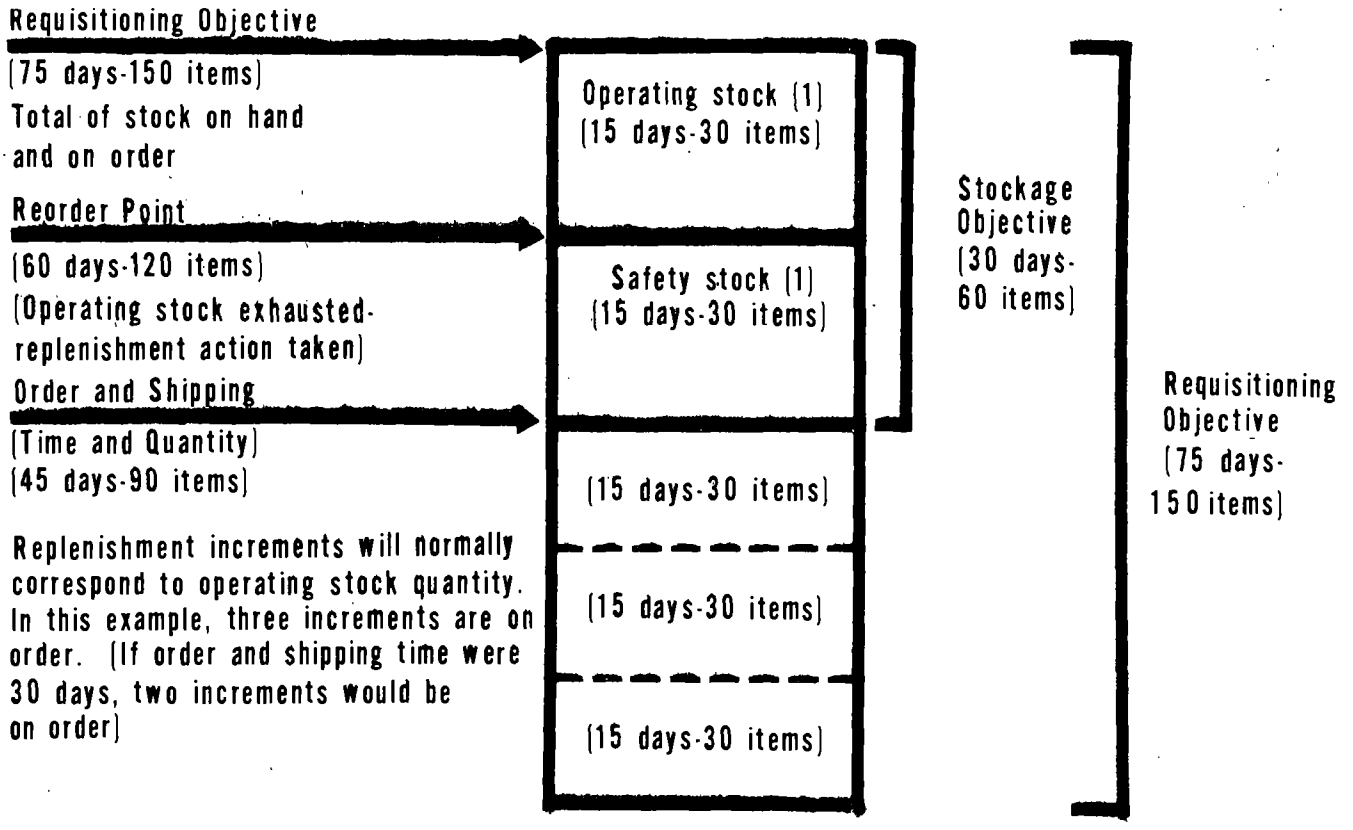
e. Procurement Lead Time. The interval between the initiation of procurement action and receipt into the supply system of the production model (excludes prototypes) purchased as the result of such actions. It is composed of two elements, production lead time and administrative lead time.

f. Requisitioning Objective. The maximum quantities of materiel to be maintained on hand and on order to sustain current operations. It will consist of the sum of stocks represented by the operating level, safety level, and the order and shipping time or procurement lead time, as appropriate.

g. Stockage Objective. The maximum quantities of materiel to be maintained on hand to sustain current operations. It consists of the sum of stocks represented by the operating level and the safety level.

h. Reorder Point. That point at which time a

stock replenishment requisition would be submitted to maintain the predetermined or calculated stockage objective. It consists of the sum of the safety level of supply plus the level for order and shipping time.



(1) "stock" and "level" used interchangeably.

Figure 9-1. Illustration of levels of supply.

9-3. Fundamentals of Supply

a. Supply must be responsive in detail, rapid in action, and simple in operation. It must be adjustable to requirements of supported units and capable of satisfying fluctuating demands. The interrelationship of supply and maintenance and their dependence upon each other for successful operations will be covered in the applicable sections of chapter 10.

b. The organization for supply encompasses—

(1) A system for stocking during peacetime for wartime requirements of combat-essential items to insure a preplanned supply capability to sustain operations pending the establishment of wartime supply procedures or the reestablishment of normal peacetime supply channels. Theater commanders and the Commander, United States Army Forces Command specify these combat-essential prepositioned war reserve stocks in accordance with AR 11-11.

(2) Personnel and facilities to receive, store, maintain, distribute, issue, and dispose of supplies and equipment.

(3) An action agency at each echelon of supply distribution that responds to requirements by directing issue, calling supplies forward for delivery to user, or placing demands on the higher echelon for action—whichever is most appropriate.

(4) Personnel to plan the supply operation and coordinate or supervise its execution; assign supply missions; and recommend or enforce policies, allocations, and priorities.

c. In the supply operation, automatic data processing equipment (ADPE) is used together with an effective communications system, to compile and transmit supply data and process management information. Additionally, the supply operation includes—

(1) A responsive requisitioning system.

(2) An inventory management system capable of providing current information on the amount, location, and condition of stocks on hand; of

balancing current and anticipated requirements against known assets; and of disposing judiciously of excess stocks.

(3) Close coordination and exchange of information with CONUS support systems and provision for the transition from a peacetime environment to a wartime posture.

(4) Designation of mission to relate supply to other combat service support operations and to facilitate assignment of supply responsibilities to specific levels of command. These designations are—

(*a*) Direct support (DS) supply, which is the supply support provided to using troops and units. In theaters of operations, DS supply is essentially customer oriented.

(*b*) General support (GS) supply, which is that support given the supported force as a whole and not to any particular subdivision, thereof. General support is essentially commodity oriented.

9-4. Responsibilities for Supply

a. Theater Commander. The theater commander insures that forces in the theater receive adequate supply support. Generally, each military service is responsible for its own supply support, except as otherwise provided for in agreements. The theater commander allocates supplies among the military services when such action is necessary.

b. Theater Army Commander. The theater army commander supplies US Army forces in the theater and supports the US Navy, US Air Force, and other authorized consumers with items as directed. The theater army commander—

(1) Executes his responsibility for operation of the theater army supply system through appropriate subordinate major functional commands and Corps commanders. He provides broad supply plans and policies for guidance of subordinate commands.

(2) Establishes policies regarding priorities for allocation of resources among major subordinate commands. Normally, he accomplishes this through policy directives covering the ten classes of supply. He may allocate specific items because of their special nature or critical status.

(3) Arbitrates differences among major subordinate commands with respect to supply support.

(4) Conducts inspections of supply activities of major subordinate commands.

(5) Provides guidance on the troop basis to be supported; normal authorizations; and project and special authorizations, including those for contingency operations and reserve authorizations.

(6) Prepares, maintains, and reviews operational project requirements and recommends their approval to the Department of the Army (DA) (AR 725-65).

(7) Establishes, within authorized theater levels, supply levels for major subordinate commands.

(8) Assigns supply units to subordinate commanders consistent with the supply mission.

(9) Operates the TA materiel management center (MMC).

c. Major Subordinate Commanders (Communications Zone). Except for those supplies for which the Navy or the Air Force has responsibility, the TA commander provides supplies to Army forces in the theater and to such Navy, Air Force, Allied Forces, and civilian activities as directed. The TA commander does not become involved in day-to-day or detailed supply operations. He executes his responsibility for operation of the supply system in the COMMZ through one or more theater army area commands, brigades, and/or groups and, the engineer command (ENCOM), the medical command (MEDCOM), and the theater army communications command (TACCOM) (operational control only) as outlined below.

(1) *Theater army area command commander.* The TAACOM commander is responsible to the TA commander for providing DS and GS supply (less medical, COMSEC logistic, and map supply) to US forces passing through or located in the area of the COMMZ and to other forces as directed. The TAACOM may also provide backup GS supply to the corps on a selected item basis as directed by TA.

(2) *Engineer command commander.* The engineer command (ENCOM) commander is responsible for providing topographic and military geographic intelligence products including maps, photographic mosaics, and gazeteers to all Army forces and other activities as directed.

(3) *Medical command commander.* The medical command (MEDCOM) commander is responsible for the DS and GS supply of medical materiel to units in the COMMZ and GS supply of medical materiel to the corps.

(4) *Theater army communications command commander.* The communications command commander is responsible for COMSEC logistic support to the theater.

d. Major Subordinate Commanders (Combat Zone).

(1) *Corps commander.* The corps commander (para 3-18) supplies the corps units and, as directed, other forces. He executes his supply responsibility through the corps support command (COSCOM) (para 3-19).

(2) *Corps support command commander.* The COSCOM commander is responsible to the corps commander for DS supply to nondivisional and GS supply to corps units. He is primarily responsible for

the planning and execution of assigned combat service support missions (FM 54-9). In carrying out this responsibility, close coordination is required with the corps ACofS, G3, operations and ACofS, G4, logistics.

(3) *Support group commander.* Support groups are major subordinate commands of the COSCOM. The support group commander is responsible to the COSCOM commander for supply to such forces as directed (FM 54-9).

(4) *Division commander.* The division commander supplies units assigned or attached to his division (FM 61-100). He executes his supply responsibility through the division support command (DISCOM).

(5) *Division support command commander.* The DISCOM commander is the division's principal representative for supply support operations. He is responsible to the division commander for carrying out the supply support plan, as well as assisting in its development (FM 54-2). Close coordination is required with the division ACofS, G3, operations and ACofS, G4, logistics.

(6) *Separate brigade commander.* The separate brigade commander supplies his units through a support battalion which contains the combat service support elements. It provides direct support supply; maintenance; and medical, administrative, and miscellaneous services to all organic and attached elements of the brigade.

(7) *Other commanders.* Commanders of separate Army units supply their own elements and make their needs known to the appropriate supporting supply echelon. They normally obtain supplies in accordance with arrangements made with the appropriate supporting commands.

9-5. Theater Supply Concepts.

Theater supply concepts have undergone extensive revision in recent years. Former concepts of large in-theater stocks managed and controlled by an extensive depot distribution system have given way to concepts such as the Direct Support System (DSS) utilizing a much greater reliance on CONUS for direct supply support as close to the point of consumption in the theater as possible. This greater reliance on CONUS support permits the level of stocks in theater to be greatly reduced and makes possible the elimination of at least one echelon of supply in the theater. An overview of these concepts is presented in the following paragraphs.

a. Theater army level stockage consists of prepositioned war reserves, operational projects, and safety level stocks. Theater army through its MMC controls these stocks, however, designated TAACOM GS supply activities may perform the storage, maintenance, and issue mission under policy guidance and direction from TA. Should the TA commander desire to position some stocks forward in the combat zone in preparation for combat operations, control of the affected GS supply activities will pass to the corps commander while control of the stocks remains under TA.

b. The basic flow of requisitions within the combat zone is from DS/GS units to COSCOM MMC to CONUS NICP. For the COMMZ, this flow is from DS/GS units, to TAACOM MMC, to CONUS NICP. The TA commander exercises management and control of selected critical items to ensure readiness in peacetime and support of combat forces in wartime. In order to accomplish this the TA commander must maintain—

(1) Selected item intransit asset visibility.

(2) Control of theater reserves.

(3) Visibility of selected items in TAACOM/COSCOM GSU.

(4) Control of selected item requisitions through the TA MMC.

Utilizing the TA MMC the TA commander can monitor selected critical items on hand and enroute to theater support units. The range of items for control can be varied and changed responsively to meet the TA commanders needs. In close coordination with the TA MMC, intransit cargo can be diverted/reconsigned as necessary or movement expedited for direct delivery to forward units. For other than TA controlled items, the management of all materiel in the theater is at only two levels, i.e., TAACOM/COSCOM and DSU/GSU/DISCOM.

c. The basic flow of supplies is accomplished direct from the CONUS wholesale support system by theater oriented depots (TOD) in CONUS on a containerized throughput basis to the TAACOM/COSCOM general support units with throughput to DS units as the situation permits. This throughput distribution system eliminates the need for large overseas depots and breakbulk operations. The COSCOM management centers (MMC and MCC) give the corps commander the capability to influence the flow of supplies to his units. Supply discipline is exercised through the utilization of tailored supply catalogs, automatic screening and challenge of requisitions at the COSCOM MMC, and through theater coordination with AMC logistics control offices. Selected critical items are automatically routed to the TA MMC. The TAACOM MMC provides for the management of supply support within the COMMZ as does the COSCOM MMC in the combat zone. The DISCOM commander also utilizes his MMC to carry out his

supply management responsibilities. The primary stockage consideration at this level is mobility.

d. In conjunction with the supply concepts mentioned above, the following paragraphs discuss several special management systems which have or are being incorporated into the logistic system.

(1) *Selected Item Management System.* In order to provide greater visibility and control over supplies, the Department of the Army implemented the selected item management system (SIMS), the objectives of which are to—

(*a*) Determine more exact materiel requirements.

(*b*) Improve the budgetary process.

(*c*) Provide maximum support with minimum investment.

(*d*) Improve positioning of assets.

(*e*) Control excess through redistribution actions.

The items selected for intensive management within the SIMS program account for approximately ninety percent of the Army's dollar value of annual demands, and include all critical and essential items regardless of the dollar value (DS Pam 710-13).

(2) *Selected Item Management System—Expanded (SIMS-X).* In order to provide a standard supply management information system to support the supply functions of distribution and requirements determination with timely central asset visibility for selected secondary items, the Department of the Army is now developing and implementing the selected item management system-expanded (SIMS-X). SIMS-X is a concept of supply management which seeks to provide more prompt, cost effective field support through vertical visibility and control of supplies at multiple levels. It is an extension of the DSS concept of minimizing pipeline and intermediate level staffing requirements. In SIMS-X, the concepts of variable intensity of management (i.e., "selected items" require more intensive management), and single DOD manager (Integrated Item Management) are applied. Hence, secondary items are grouped for supply management purposes and MILSTANDARD codes and procedures are prescribed to enable interservice applicability of the concept. (Pending development of interservice applications, it is planned that only Army-managed items will be covered). SIMS-X is a comprehensive system that will initially address requirements, distribution, storage policies and procedures for selected secondary items, down to the installation level. The selected secondary items covered under SIMS-X are planned initially to represent approximately sixty percent of the Army's dollar value of annual demands for all secondary items. SIMS-X will interface with several separate intensive management systems. Shown below are those systems with which SIMS-X must interface. (It is envisioned that SIMS-X may be the basis for, and subsequently become a part of single reporting system consolidating/eliminating some of the management systems described below.)

(*a*) The Aviation Component Intensive Management System (ACIMS). The ACIMS is designed to provide for the intensive management of Army aircraft engines and other aviation reparable components. A principal feature of ACIMS is daily transaction reporting, by individual item serial number, designed to provide the NCIP item managers with changes, as they occur, in the location, status, or condition for approximately 300 prime and related secondary items.

(*b*) The Aviation Intensive Management Item (AIMI) System. The AIMI System is an intensive management program designed to provide an optimum number of spare aviation components, reparable and nonreparable, required to support Army aircraft worldwide. Selection of AIMI items is based on item criticality to support aircraft, dollar value of demands, or critical current or projected supply status. The AIMI program features periodic direct negotiation of supportable levels between AVSCOM and the supported command, and allocation of available assets from procurement, overhaul, or redistribution.

(*c*) The Automatic Return Item (ARI) System. The ARI System is a program designed to inform retail supply activities worldwide that specific items are in a critical stock position at the wholesale level. Items are broadcast to the retail activities by a quarterly ARI list distributed by the Logistic Control Office. Retail activities are required to immediately ship unserviceable reparables and excess serviceable items to a predetermined AMC depot without waiting for disposition instructions (FTE/FTR process) from the NICPs.

(*d*) The Long Range Continuing Balance System (CBS). The CBS is designed to provide a more timely accurate, and auditable worldwide asset position for use by item managers in making procurement and distribution decisions relating to major items of equipment. An essential feature of CBS is in maintaining a continuing asset balance from one report period to the next, utilizing transaction reporting.

(*e*) The Direct Support System (DSS). (para 8-1*a*).

(*f*) Direct Exchange (DX) System. The DX System is designed to implement improvements which will control DX item movement to include delivery and retrograde; give maximum visibility of

DX assets and promote economic maintenance and repair cycles through controlled DX return of unserviceables for the scheduling of their repair.

(3) *Intransit asset visibility.* A vital element necessary for the effective implementation of the concepts mentioned in the preceding paragraphs is the capability of supply managers to know where assets are in the logistics pipeline and to be able to manipulate or redirect their movement. The Logistics Intelligence File (LIF) maintained by the US Army Logistics Control Agency at the Presidio of San Francisco, California, gives item managers visibility of reportable item control code (RICC) I, and II and DSS cargo from the initial CONUS shipping point to the consignee in the theater. There remain, however, a number of voids which prevent total visibility of the logistics pipeline, for example, the lack of visibility of shipments not originating in CONUS, the lack of visibility of non-Army sponsored cargo, and the lack of visibility of in-theater intransit cargo on a checkpoint basis. In Europe, attempts to fill these voids have resulted in a theater data bank, now under development, to be linked to materiel management centers and other theater supply management activities throughout the theater. Access to the Visibility of Intransit Cargo (VIC) System, a transportation information system under development which will be linked to movement control conters and other movements management activities throughout the theater, will allow the theater data bank to provide supply managers with the current status of in-theater intransit supplies. Together, using high-speed communication and ADP techniques, the LIF, the theater data bank, and the VIC can effectively interface supply and transportation documentation to provide supply managers in CONUS and in the theater an independent source of supply performance data and a complete overview of the logistics pipeline.

Section II. INVENTORY MANAGEMENT

9-6. General

Inventory management is defined as the phase of military logistics which includes managing, cataloging, requirements determination, requisition or procurement, distribution, overhaul, and disposal of materiel.

a. The functions of inventory management include:

(1) Management of supply assets.

(2) Cataloging, which includes item identification, standardization, and item interchangeability/substitution.

(3) Computation of supply requirements.

(4) Requisitioning or procurement of required supplies.

(5) Stockage and distribution of supplies to meet consumer demands.

(6) Determination of overhaul requirements, development of programs, and provision of program direction.

(7) Disposal of items when no longer required.

b. The order of listing of the functions in *a* above, will not necessarily be applicable in the actual management of an operating system. On the contrary, inventory management encompasses all the tasks listed above in appraising the entire process of supply as an interrelated chain of activities from procurement through distribution or disposal.

9-7. Inventory Control

Inventory control is the process that documents the supply, distribution, reconditioning, and/or disposal of an item of supply. This is done through a system of reports, computations, and evaluations which allows definitive supply action in the form of budget estimates, procurement, allocation, or disposal. The basic elements of an inventory control system are—

a. Cataloging, which includes the establishment of National Stock Numbers, management control numbers, document records, distribution data, environmental aspects, standardization, and usage data.

b. Distribution, which includes determination of storage location, review of special handling requirements, providing prepositioned materiel receipt, distribution of support items, maintenance of demand date, and development of supply control studies.

c. Provision of guidance, requirements, and resources relating to the overhaul/rebuild program.

d. Disposal of excess, surplus, scrap, or salvage property under proper authority. Disposal may be accomplished by transfer, declaration to a disposal agency, abandonment, or destruction.

9-8. Supply Control

Supply control is the process by which an item of supply is controlled within the supply system. It includes requisitioning, receipt, storage, stock control, shipment, issue, disposition, identification, and accounting.

a. The supply control system provides a systematic means for maintaining the best possible balance between supply and demand to insure timely

provision of needed materiel, prevent accumulation of excess stocks, and to determine quantities of stocks available for redistribution or disposal. The system requires that essential data concerning the supply-and-demand status of an item be compiled, kept up to date, and centrally controlled.

b. The basis element of a supply control system are—

(1) Supply policies of the command.

(2) Stock control records and supply reports. (Thus, supply control includes stock control).

(3) Forecasts of supply requirements and availability.

(4) Data on the past, present, and future supply status of individual items.

(5) A responsibe ADP system of sufficient capacity to support operations.

9-9. Stock Control

Stock control is the process by which pertinent data are maintained on the quantity, location, and condition of supplies and equipment due in, on hand, and due out. The objective of stock control is to determine the quantities of supplies and equipment available and/or required for issue and to facilitate distribution management of these items.

a. The stock control system includes procedures by which—

(1) Requisitions are filled on a timely basis.

(2) Shortages and excesses in stock levels are discovered and reported.

(3) Surplus, obsolete, unserviceable, and salvage items are located and reported.

b. The timely placing of requisitions and aggressive followup action is necessary to maintain stock levels. If stock levels fall below the safety level, command action must be taken to provide essential requirements. It may be necessary to ration or regulate items in short supply.

c. Stock control efficiency depends on rapid and accurate posting and review of central stock control records; audit of installation records; accurate inventories; and inspection, assistance, and instruction throughout all commands. Use of ADPE provides a capability to simplify operations, initiate management by exception techniques, and provide realtime data.

d. Whenever supply levels of a command appear either inadequate or excessive, the commander recommends revision of the prescribed supply level.

9-10. Theater Army Inventory Management

Inventory management at theater army level is limited to actions necessary to effectively manage those items which the theater army commander or higher authority deem sufficiently critical. Such items will generally include ammunition, bulk petroleum, major artillery pieces, tanks, etc. For these items requisistions are passed from the COSCOM and TAACOM MMCs direct to the TA MMC rather than to a CONUS NICP as are normal requisitions. Actions required to process such items may vary depending on the situation. In some cases a priority requisition may be apssed to the CONUS NICP, or, through close coordination with the TA MCC intransit cargo may be diverted or reconsigned as necessary. In some case another COSCOM and TAACOM MMC may be queried to locate an item in the theater or an emergency shipment from TA controlled reserve stocks may be authorized.

9-11. COSCOM/ TAACOM Inventory Management

The COSCOM and TAACOM inventory management systems consist basically of two echelons—an inventory element at GS supply and storage locations, and an MMC at command headquarters.

a. Operationally, for GS supply, the systems are predicated on decentralized inventory locations and centralized inventory management activities which are provided ADP services and electronic communication facilities. A minimum of records are maintained at the GS supply and storage locations. These records consist of locator files and shipment records.

b. The MMC is the heart of the COSCOM and TAACOM supply management systems. It provides inventory management for all classes of supply for which the command has jurisdiction. The MMC uses electronic equipment to process and transmit supply and stock control information. The automatic data processing center (ADPC), an organization separate from the MMC, provides automatic data processing (ADP) service for the MMC. The ADPC makes logistic information readily available and permits responsive action. To facilitate highspeed supply transactions, the MMC connects electronically to CONUS national inventory control points (NICP), the TA MMC, the TA MCC, other command functional control centers, GS supply storage activities, and the PERSCOM personnel and administration center (strength data).

c. The MMC at each command meets demands from supported units by directing shipments from any source under command jurisdiction or by requisition from CONUS. The MMC makes recommendations concerning levels of supply and additions to or deletions from authorized stockage lists. It forecasts and determines command requirements and provides, as necessary, specified stock record support activities as outlined in Army field stock control regulations.

d. While the MMC directly or indirectly influences the activities of operating supply units, it is not in the chain of command. Commodity managers in the MMC review machine actions and interpose human judgment whenever necessary. They make determinations or recommend actions that are not adaptable to routine machine solution and ensure that the commander possesses timely and accurate information on which decisions can be made.

9-12. Alternate Methods of Control

a. Designation of alternate ADP facilities provides for continuing ADP functions in case of emergency. Relationships should be established and designations made between the TA, TAACOM, and COSCOM ADP facilities so that an exchange of periodic summary data and records may allow a designated alternate facility to assume the functions of another facility if necessary. If alternate ADP facilities are not available, scheduled periodic printouts can be used for short periods in a manner similar to the manual stock record system.

b. To insure continuing supply under all contingencies, planning at TA headquarters provides for measures to be taken if there is a disruption in communications amoung the TA MMC, COSCOM, MMC, TAACOM MMC, and GS storage activities. Such measures normally consist of emergency shipments of established quantities and types of supplies from storage activities. Requirements can go by airmail or air courier if communications between the MMCs and CONUS NICPs are disrupted.

c. To insure continued and uninterruped management in the COSCOM and TAACOM, there is a completely integrated system of alternate capabilities. The TAACOM MMC can temporarily assume the functions of any one COSCOM MMC and a COSCOM MMC can temporarily assume the functions of the TAACOM MMC.

d. In the event of complete system disruption, requesting organizations go directly to the storage locations rather than to the MMC. In general war, there may be situations in which contact with combat units and forward supply units is broken for sufficient time to warrent emergency resupply. In these situations, GS units in the corps rear area or forward storage areas in the COMMZ ship predetermined survival supplies to affected forward areas, based on directives from the COSCOM or the TA MMC respectively.

Section III. REQUIREMENTS

9-13. General

Supply requirements are statements of the need for specific quantities of supplies and equipment for specific periods of time or at specified times.

a. Staff planners, whether in a fully developed theater or a contingency force support command, develop the gross tonnage estimate of supply requirements. This estimate serves other important planning considerations, such as transportation, troop, and construction requirements, each of which use gross tonnage as a major factor in determining support requirements.

b. Supply requirements are classified in accordance with the need that each is intended to satisfy. The classifications and criteria for establishing them are shown in (1) through (4) below.

(1) Buildup supply requirements provide for initial issue of supplies and include stocks required to sustain operations until initial resupply can be accomplished.

(2) Replacement and consumption requirements keep initial equipment at authorized quantities and replenish supplies consumed, expended, lost, contaminated, or destroyed.

(3) Reserves are stocks of materiel intended to sustain operations until resupply can be accomplished (AR 11-8 and AR 11-11).

(4) Operational project requirements authorize major commanders additional supplies and equipment for the purpose of supporting specific operations, contingencies, or war plans for a specifiec geographic area.

c. In the theater of operations, commanders must know their authorizations for supplies and equipment and the quantities on hand as a basis for requisitioning and planning. To insure availability of proper types and adequate quantities of supplies for current and projected operations, the TA staff requires information on strategic and tactical plans as far in advance as possible. TAACOM and COSCOM staffs also must know the kinds and quantities of supplies planned for procurement or available for projected operations.

d. In initial stages of mobilization or contingency operations, supply requirements represent, for the most part, needs for initial buildup. In later stages, most requirements represent needs for replacement and replenishment (resupply). The Department of the Army basis its computation of these supply requirements on the forecast of troop deployment, theater stockage objective or supply levels, theater

replacement factors, and consumption rates. Theater army commanders must forecast their own requirements at the earliest possible date, as obtraining supplies on a large scale may require a leadtime ofmany months.

9-14. Buildup Supply Requirements

a. Bases for the determination of buildup supply requirements are current tables of organization and equipment (TOE), modification tables of organization and equipment (MTOE), tables of distribution and allowances (TDA), additive operational projects (described in AR 710-1), and similar authorizations. Compilations of these requirements help determine replacement, consumption, and reserve requirements.

b. In an oversea command, accurate computation of buildup supply requirements depends on a knowledge of—

(1) Troop basis and allowance authorizations under which troops and installations are to be supplied.

(2) Status of supplies in the hands of troop units.

(3) Dates of arrival or activation of troop units.

(4) Civilian supply requirements.

c. Computation of requirements and determination of shortages are staff functions. Commanders and staffs must provide the appropriate combat service support organization with such data as troop basis, status of supplies in the hands of troop units, phased arrivals, operation plans, and the period for which computations are to be made.

9-15. Replacement and Consumption Requirements (Resupply)

a. Successful operation of an organization demands that supplies by available when needed. When supplies are received daily, needs can be met with a minimum operating level of supply. When supplies are received less frequently, it is usually necessary to increase levels of supply. Basis for the computation of replacement and consumption requirements are the authorized days of supply levels and the following:

(1) Projected troop strength for the period.

(2) Changes in composition of the force supported.

(3) Seasonal requirements.

(4) Anticipated operations that create special requirements.

(5) Revision of replacement factors and consumption rates as a result of additional experience.

b. Determination of daily or periodic replacement and consumption requirements is a staff function. The logistic staff member concerned receives the information affecting requirements in sufficient time to meet demands for contemplated operations. Commanders and staffs are responsible for obtaining necessary experience data from using units to improve the factors used in determining requirements.

9-16. Reserve Requirements

Reserve requirements represent quantities of items in excess of immediate needs to insure continuity of supply. They include supplies prescribed for particular purposes, such as contingency retention stocks and equipment for newly activated organizations. Commanders are responsible for obtaining authorizations for supply reserves and for issuing directives and guidance to the appropriate military service of subordinate commands for accumulation and replenishment of supply reserves.

9-17. Operational Project Requirements

a. Operational projects approved by DA authorize major commanders to acquire materiel for theater or CONUS stockage for the purpose of supporting specific operations, contingencies, and/or war plans for specific geographic areas. Project stocks are indentified as mobilization reserves. Operational projects are of two types, as follows:

(1) Additive projects, which consist of requirements in addition to the initial issue allowance contained in MTOE, TDA/MTDA, and CTA; and in addition to the levels authorized by AR 11-11. Upon approval by the Department of the Army, additive projects automatically increase authorized acquisition objectives by the quantities specified in the project.

(2) Nonadditive projects, which consist of prepositioned materiel configured to unit sets (POMCUS) to reequip specific units upon initial deployment to the theater in which materiel is stored or to an alternate theater. Requirements contained in nonadditive projects normally do not increase materiel acquisition objectives. Nonadditive requirements may be added to materiel acquisition objedtives, provided it can be shown that these requirements cannot be supported from authorized post D-day consumption reserves or initial allowances not needed by inactive forces until deployed. Certain non-POMCUS projects may also be designated as nonadditive projects based on special considerations.

b. Operational projects enable planning of mobilization reserve requirements, either as additive or nonadditive supply authorizations. Operational project requirements may originate in a theater or may be part of the DA plan for a specific operation. Theaters must submit operational project requirements early so that DA can consolidate demands of all theaters for orderly and economical procurement and supply. Long procurement lead-

times may make it necessary for DA to initiate operational project requirements before a theater commander or theater army commander is designated. Operational project requirements so initiated may require revision later, based on theater recommendations.

c. Operational project requirements include lists of materials and shipping schedules, when appropriate. While theaters may prepare complete lists of materials, DA frequently prepares them, based on a general statement of the task to be accomplished. The latter method has advantages, especially where construction is necessary, because technical specialists familiar with design, nomenclature, and sources of materials are usually available in CONUS.

d. The theater army commander's responsiblitiy for operational project requirements includes—

(1) Reviewing DA authorized operational projects to determine their suitability and to recommend necessary changes.

(2) Determining the need for additional operational projects and, where applicable, obtaining DA assistance and approval.

(3) Issuing necessary directives to subordinate commanders to obtain needed supplies and to take action to complete the operational project requirement.

(4) Allocating transportation assets made available for movement of materials to the theater.

(5) Issuing necessary directives for safeguarding, preservation, and control of operational project stocks stored in theater.

e. Examples of projects that must receive special consideration include—

(1) Fixed signal installations.

(2) Base installations, including shops, assembly areas, port facilities, hospitals, rest areas, military confinement facilities, prisoner of war camps, Army exchange, and postal systems.

(3) Rehabilitation or construction of transportation facilities, tactical and LOC bridging, airfields, petroleum pipelines and related facilities, field fortifications and protective construction, and barriers, camouflage, and tactical cover and deception facilities.

(4) Specialized equipment (e.g., helicopter external lift slings) and increased levels of supply needed for special operations.

f. Additional details on operational projects are contained in AR 710-1.

9-18. Levels of Supply

The Department of the Army prescribes levels of supply for theater army in terms of days of supply (AR 11-11). The two broad areas of levels of supply are peacetime operating stocks and war reserves. Usage factors and experience data vary among different items of supply. Collectively, these levels constitute the stockage objective (para 9-2*g*) of the command concerned and permit requisitioning, control, movement planning, and associated activities. The theater stockage objective represents the maximum quantities of materiel to be maintained on hand to sustain current operations.

a. The theater army commander prescribes overall levels for all major subordinate commands in the combat zone and the COMMZ. Factors considered in establishing subordinate command levels include—

(1) Levels prescribed for the theater army commander by higher authority. These levels represent the maximum stockage authorized.

(2) Locations of subordinate commands.

(3) Capability of subordinate command to store supplies.

(4) Order and shipping time between organizations, to include consideration of vulnerability of routes.

(5) Character and relative importance of the combat missions of supported tactical units.

(6) Vulnerability of supply installations.

(7) Estimated reliability of resupply capability.

(8) Estimated wartime requirements for materiel for which increased demand is expected under combat conditions.

(9) Requirement for mobility.

(10) Allied forces support requirements.

(11) Civil population requirements. (if applicable)

(12) Availability of local supplies for military procurement.

b. Supply level quantities at the various theater army echelons are not fixed. Amounts actually stored at each echelon vary amoung commodities and items within each commodity grouping, based on supply actions directed by TA.

c. Increasing the speed with which requisitions are prepared, transmitted, and processed, and increasing the speed and reliability of supply shipments reduce the required number of days of supply in a theater army supply system.

9-19. Stockage

a. General. Use of the selective stockage principle, in accordance with AR 710-2 and within criteria established by the theater commander, reduces problems incurred by stockage of large numbers and types of supplies. The selective stockage principle is, in application, that each echelon stocks items most frequently demanded by supported organizations and relies on responsive support to furnish those items that do not meet stockage criteria. The bases

for stockage at each echelon are demand experience, combat essentiality, and estimates of future requirements. Maximum effort will be placed on use of modern, oceangoing container ships and/or air capability to shorten logistic pipelines when feasible. It is the DA objective that stockage at all levels be based on variable demand criteria oriented to readiness.

b. Responsibilities.

(1) The NICP converts Department of the Army-approved theater stockage objectives contained in AR 11-11 into a theater-authorized stockage list.

(2) The theater commander may recommend additions and deletions of items to the list. The NICP may recommend additions and deletions and revisions in the case of newly introduced equipment, obsolete, and critical supply items.

c. COMMZ Stockage. Stockage at TAACOM COMMZ storage locations includes—

(1) Mission-essential support items.

(2) Items qualifying for stockage based on the demand frequency criteria.

(3) Items for support of equipment newly introduced into the theater when directed by TA.

(4) TA controlled prepositioned war reserves and operational project stocks. (as directed)

(5) Authorized reserves and obligated stocks.

(6) Operational readiness float items.

(7) Designated DX itmes.

d. Corps Stockage.

(1) Stock control and storage elements of the COSCOM maintain an up-to-date list of all items authorized for stockage. Normally, the corps stockage list is developed by the theater commander and DA. The corps commander can recommend additions or deletions to the corps stockage list, and, in fact, may make deletions to corps stockage lists at any time, subject to acknowledgement by the theater commander after-the-fact.

(2) Corps stockage includes—

(*a*) Mission-essential support items.

(*b*) Operational readiness float items.

(*c*) Items qualifying for stockage based on the demand frequency criteria.

(*d*) Items for support of newly introduced equipment.

(*e*) Reserve stocks, as authorized.

(*f*) Designated DX items.

e. Division Stockage. The level of stockage at the division is dominated by mobility considerations. The division must be able to displace with its organic transport, augmented by available corps transportation, in order to provide uninterrupted and responsive supply and maintenance support to divisional elements. Details on division level stockage may be found in FM 54-2.

f. Physical Inventories. Physical inventories of storage locations insure that stock accounting records reflect the true stock position.

(1) Storage locations take complete inventory either at a specific time or on a continuous-cycle basis, as prescribed by the appropriate command.

(2) Storage locations take special inventories whenever it is necessary to verify or adjust the stock record account of a particular item.

Section IV. SOURCES OF SUPPLY

9-20. General

A theater of operation obtains supplies from sources outside and within the theater. Sources outside the theater include the CONUS, other theaters, and Allied countries. Sources within the theater include local procurement, fabrication, controlled cannibalization, captured materiel, and reclamation of supplies through repair.

9-21. Supply From Continental United States

Supply from the CONUS on a requisition basis is the normal method of supplying most items to an established oversea command. The CONUS NICP in coordination with MMCs overseas, on a preplanned basis, may supply a newly established theater or an operational area in which a supply system has not been developed. Such shipments are not automatic but are called forward by the consignee. The CONUS supply system preplans and predetermines supply requirements and normally develops them in conjunction with and on the basis of the pertinent Army component commander's operational plans. As the theater gains control over its supply functions, it furnishes CONUS agencies available supply status information, which is a basis for modifying the flow of items as necessary. The Department of the Army, based on recommendations of the theater commander, prescribes the date on which this preplanned supply ceases. Coordinated action by all supply agencies is necessary to prevent interruption of supply and to avoid duplication of shipments. The theater commander should react as quickly as possible to establish his own supply management capability to avoid a buildup of excesses and any continuation of shortages which may result during preplanned supply.

a. While preplanned shipments are in effect, units

deployed to new theaters take an initial issue of supplies and equipment composed of the basic load, prescribed load, and authorized stockage list/-mission load (AR 710-2). These loads enable units to sustain themselves until resupply is available on a continuing basis. The CONUS agencies ship additional replacement and maintenance supplies periodically in accordance with established schedules. A variation to units deploying with their initial supplies and equipment occurs when units move to areas having prepositioned equipment. Under this procedure, accompanying supplies and equipment are fewer, deployment and employment are more rapid, and preplanned supply furnishes continuing support.

b. Armywide shortages may cause the Department of the Army to exempt certain items from requisitioning and preplanned supply procedures. In such cases, DA may require theaters to report requirements, quantities on hand and due-in, shortages, and expenditures. Based on these reports, DA allocates available supplies on a distribution schedule and ships them in accordance with priorities. Alternatively, DA may inform the theater commander of the allocation and authorize him to call the items forward by requisition.

c. Periodic submission of supply requisitions to the CONUS are in accordance with DA policies on military standard requisitioning and issue procedures (MILSTRIP). Except for TA controlled items, the TAACOM MMC and COSCOM MMC forward requisitions for supplies direct to a CONUS NICP for action. TA controlled items are requisitioned by the TA MMC.

9-22. Transfer of Supplies From Other Theaters

Transfer of supplies from other theaters is under Department of the Army direction. Such redistribution is undertaken as excesses accumulate in these theaters or as operational emphasis changes.

9-23. Procurement Within a Theater

a. Procurement from sources within a theater of operations saves time and transportation, reduces the workload in the supply system, and conserves US resources.

b. In procuring local resources, arrangements with Allied governments and the needs of local populations are considerations. Useful local resources include supplies and such services as transportation, contract construction, utilities, and labor. Supplies most desirable for procurement are those for which oversea procurement conserves the most shipping space. Examples are food, solid fuels, petroleum products, construction materials, and some ammunition when available.

c. Local resources may be available through purchase, requisition, or contribution.

d. The theater commander prescribes broad procedures for procurement of resources within the theater of operations, in conformity with the Armed Services Procurement Regulation (ASPR) and published implementations. Considerations will be given to local laws and customs, laws of land warfare, and international balance of payments.

e. The US theater army commander, in the Head of Procuring Activity (HPA) role (if so appointed), publishes implementing plans, policies, instructions, and directives. He coordinates with collateral commands, theater unified commanders, and local governments in the accomplishment of the procurement mission.

f. The TA commander is normally responsible for procurement of supplies and services on a theater-wide basis. In cases when operating conditions so indicate, major subordinate commanders may receive limited procurement authority.

g. Civil affairs (CA) units assist procurement agencies in obtaining authorized local resources, uncovering hidden resources, and providing liaison with civilian agencies. Civil military operations (CMO) staff officers determine and report the effect of procurement on the local civilian economy and recommend local procurement policies to the commander.

9-24. Reclamation of Supplies

a. Reclamation of supplies through repair restores unserviceable items to serviceable condition and returns them to the supply system for reissue. Parts removed from uneconomically repairable items through a cannibalization program also are important sources of supply.

b. Decontamination procedures are another means for reclaiming supplies for reissue.

Section V. DISTRIBUTION

9-25. General

Distribution is the function of supply concerned with the receipt, identification, sorting, storage, transportation, and issue or final disposition of supplies. The distribution system must integrate these tasks. Efficient distribution requires knowledge of operation plans, availability of supplies, and the needs of using units.

a. Principles. The basic principles of distribution are as follows:

(1) The distribution system must be readily adaptable to changing situations.

(2) Sufficient supplies must be on hand to permit replacement of each day's expenditure prior to commencement of the following day's operation when possible.

(3) Supplies should be located to reduce delay in meeting demands.

(4) The distribution system must make the most efficient use of available transportation and eliminate unnecessary shipment and rehandling of supplies.

(5) Each commander should have under his control only the supplies necessary to accomplish his mission.

b. Documentation. Documentation is the preparation and maintenance of records of the identity, quantity, location, condition, and disposition of supplies. Accurate information must be available on materiel required, on hand, due in, and due out; and on the routing of materiel in transit.

(1) Requisitions and reports of receipt or nonavailability are essential steps in documentation.

(*a*) Requisitioning is essentially the placing of demands for supplies and equipment on supply agencies. A requisition may be a verbal or informal request, an estimate, a call against a credit, a status report, etc. A requisition is usually a complete, formal document prepared and transmitted in accordance with MILSTRIP as implemented by AR 725-50.

(*b*) Requisitions within a theater vary among classes of supply because of differences in physical characteristics and methods of handling. Use of ADP, high-speed transmission, and single line item requisitions speeds the requisitioning process.

(2) The purpose of documentation is to provide supply and shipping information required by the consignor, carrier, and consignee to identify and transport supplies. A single document that provides complete information for the agencies concerned is desirable.

(3) The CONUS air or water terminal is responsible for insuring that shipments are forwarded with proper manifests, addressees, and stowage plans. In the theater of operations, TASCOM shipping agencies are responsible for proper identification of shipments. The shipper normally is responsible for preparation of documents initiating movement.

(4) Documentation provides—

(*a*) Sufficient information to transportation agencies for control and identification of shipments at transfer points.

(*b*) Specific supply information to designated combat service support agencies.

(*c*) Advice to the consignee that the shipment is enroute.

(*d*) A basis of payment to nonmilitary carriers.

c. Marking, Packaging, and Packing. Marking of supplies and equipment normally consists of the address, project code, handling and distinctive markings (MIL-STD 129), and identification of contents. Facilities for loading and unloading and the necessity for conservation of shipping space determine methods of packaging. When suitable materials handling equipment is available, use of pallets, containerization, and other bulk handling systems are considerations. Packaging and packing must insure adequate protection against rough handling and the elements both en route and in storage.

9-26. Storage

a. General. Supplies are stored or held in transit in supply points, distribution points, and transportation terminals. GS and DS supply units operate supply points. Stocks at transportation terminals are placed under intransit holding pending further disposition. Handling, shelter, and protection are necessary each time supplies are stored or held in transit; therefore, the number of storage handling operations should be minimal. This is particularly critical at water and air terminals where supplies must be cleared expeditiously to avoid congestion within the terminal area.

b. Concept of Operations. The concept for storage operations includes throughput of supplies, minimum administration, maximum mechanized handling of supplies, and improved specialization of labor.

(1) Throughput distribution of supplies is one of the most significant means of reducing inventory requirements. Differences in areas of operations, tactical plans, and enemy capabilities will influence how far forward supplies can be throughput and at what point they must be handled as breakbulk. Surface containers will normally be throughput to GS units and to DS units when practicable.

(2) The GS supply function in both the COMMZ and combat zone is essentially the processing of supplies in bulk quantity. The objective is to group those supplies adaptable to palletization and containerization in one supply unit to permit the optimum use of mechanized handling techniques. Accordingly, it is not enough to equip the supply units with appropriate mechanized

capabilities, but it is also essential that supplies be prepared, handled, and moved in a manner compatible with mechanization. Thus, with palletization and containerization of supplies in the CONUS, the mechanization chain is not broken until the supplies pass through the supply system to the lowest practical echelon.

(3) The GS supply functions can be subdivided into the tasks and skills required to perform storage operations. To maximize their productivity, supply units are organized to perform related tasks with groups of supplies that have similar storage handling requirements.

9-27. Theater Distribution

a. The TAACOM and the COSCOM are responsible for the distribution of all supplies (less medical (TAACOM), COMSEC logistic, maps and related topographic documentation and other minor exceptions) in the theater except for movement control over shipments from CONUS to forward areas (*b* (2) below). The medical command is responsible for the distribution of medical supplies in the COMMZ while the TACCOM distributes COMSEC logistic supplies.

b. In general the TAACOM distribution procedures are similar to those of the COSCOM outlined in *c* below. A brief discussion of distribution procedures within the COMMZ follows in (1) through (3) below (fig 9-2).

(1) The TAACOM MMC receives requisitions or strength reports from COMMZ general support and direct support units. In response to these requisitions or reports, the TAACOM MMC sends shipping directives (or materiel release orders) to GS supply installations in the COMMZ. If the item is not available and is not a TA controlled item, the TAACOM MMC submits a requisition to a CONUS NICP. If it is a TA controlled item the requisition is submitted to the TA MMC.

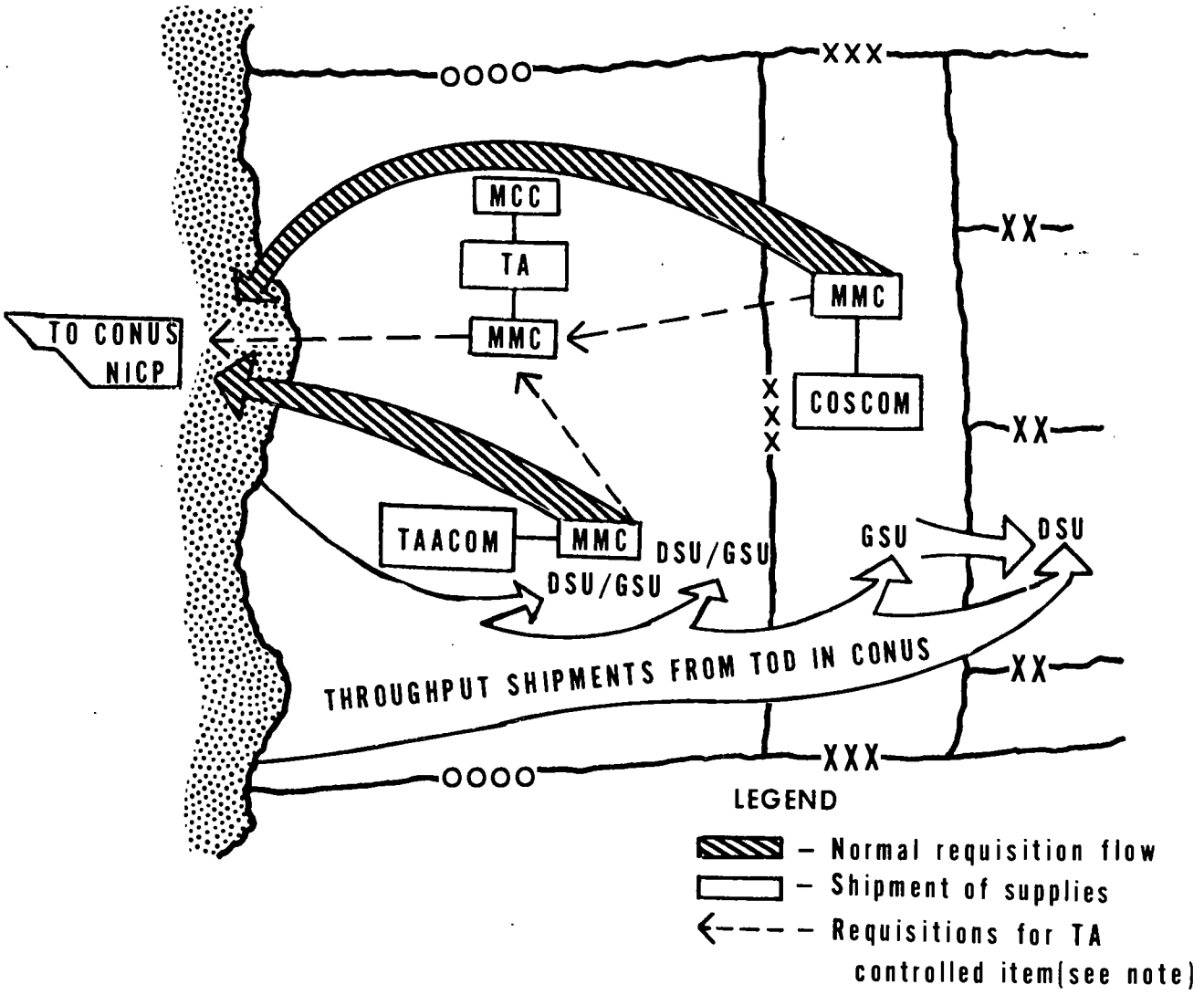
(2) The TAACOM MMC coordinates transportation requirements with the TA MCC, since the MCC has knowledge of the total movement requirement (supply, tactical, administrative); the mode and terminal capabilities; and the shipping and receiving capabilities of each supply activity, along with their current and forecast shipping/receiving workloads.

(3) Emphasis is on scheduled supply for items for which requirements can be reasonably predicted. Scheduled supply is a system whereby any unit (user or supplier) is furnished some or all of its supply requirements by a previously planned schedule which specifies items, quantities, time, and place of delivery. The user can modify or change this schedule at any time by notifying the supplier. Disruption of rapid electronic communications between the theater commander and the sources of supply will cause institution of emergency control procedures using the USAMC logistic control offices (AR 725-50) in the CONUS.

c. Details on corps distribution are in FM 54-9. A brief discussion of such distribution follows in (1) and (2) below.

(1) In operation, the COSCOM MMC like the TAACOM MMC exploits the full potential of ADPE. A reliable communications net, transceivers, card-punch machines, and other supporting devices are required.

(2) Divisional and nondivisional DS units transmit supply requirements to the appropriate COSCOM MMC, which issues shipping instructions to storage units. If the required items are not available among the stocks controlled by a particular MMC, and are not TA controlled items, the center transmits the requirements to a CONUS NICP. If the item is a TA controlled item the requisition is passed to the TA MMC for action.



NOTE- Requisitions for critical items flow to TA MMC for appropriate action. This may entail priority shipment from CONUS, diversion of inbound shipment, search of other support commands in theater, or emergency shipment of item from TA controlled reserves in the theater.

Figure 9-2. Requisition and supply flow (schematic).

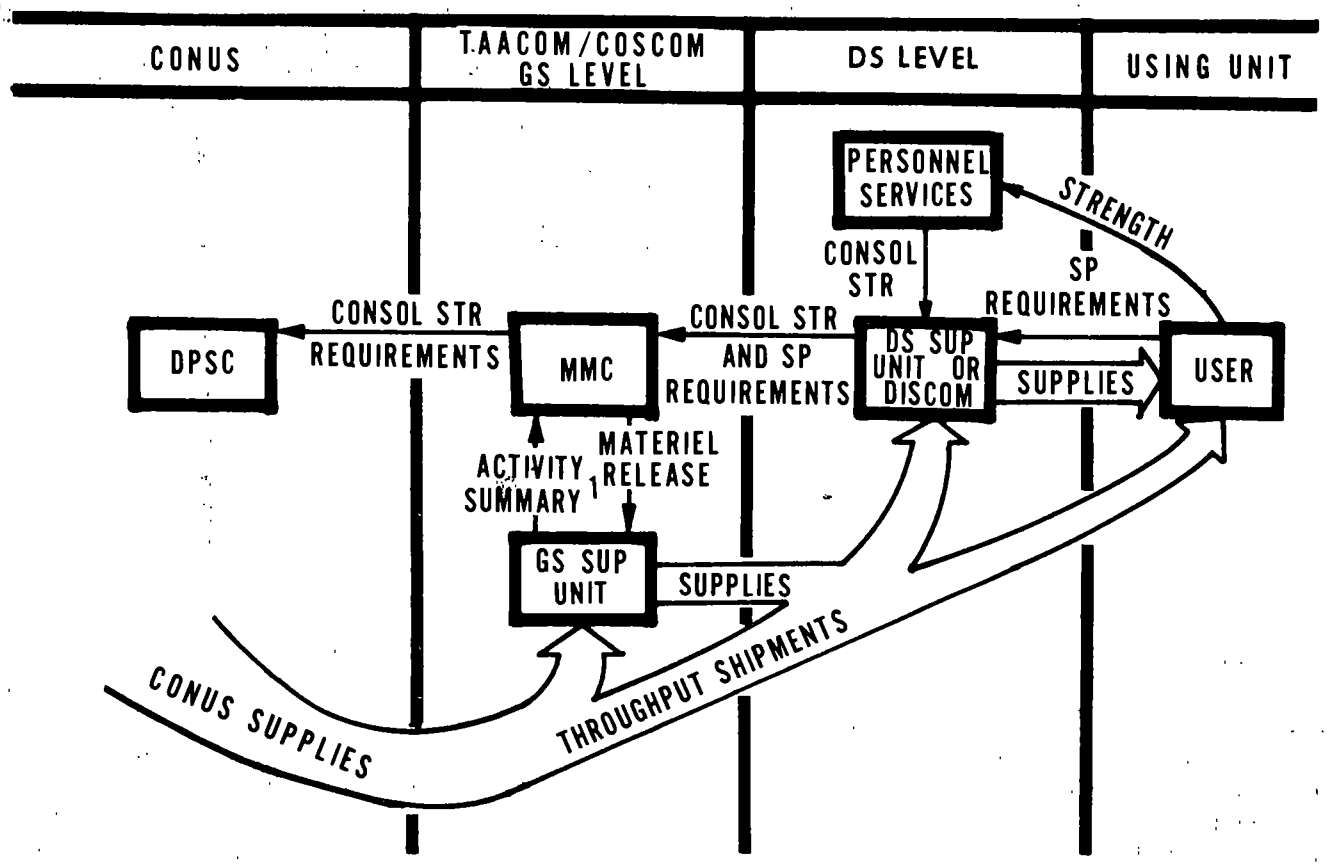
Section VI. COMMODITY SUPPLY OPERATIONS

9-28. Class I Supply

a. Class I supply in a theater of operations is primarily a matter of large bulk and tonnage. Refrigeration requirements for class A rations will be based on the theater feeding policy that results from the commander's decision after considering cost in terms of equipment and food service personnel. Issue of health and comfort items such as salt tablets, soap, insecticides, toilet paper, and similar items are normally handled through class I channels along with combat rations.

b. Strength reports, with the addition of any special requirements, generally act as the triggering device to cause the shipment of commodities (fig 9-

3). The personnel services company of the appropriate COSCOM or the personnel services division of the DISCOM AG company provides strength data. The TAACOM and COSCOM MMC submit requirements to the Defense Personnel Support Center of DSA in CONUS who procures food, clothing, textiles, and individual equipment for the Army. Perishable subsistence may, when feasible, be obtained from local sources in the theater. Shipments from CONUS bypass GS units, wherever practicable. When possible, shipments originating at the GS level go directly to the using unit.



[1] Activity summary consists of receipt, requested inventory reports, and materiel release denials.

Figure 9-3. Flow of items consumed according to strength (schematic).

9-29. Class II Supplies

Requirements for class II supplies (nonregulated), in the form of single line item requisitions, flow from the user through the various supply control elements as shown in figure 9-4. The GS supply units are storage points and react to instructions contained in the MMC's materiel release orders or shipping directives. The DS supply units, including those of the division, fill user requirements from available stocks. The DS elements submit requirements to the TAACOM and COSCOM MMC, using automated communications for unfilled requisitions and stock replenishment. The MMC directs shipment from available GS stocks and coordinates movement with the MCC. The TAACOM and COSCOM MMC periodically report status of authorized stockage to the TA MMC. Shipments from CONUS and GS supply units bypass intermediate storage locations and proceed as far forward as feasible.

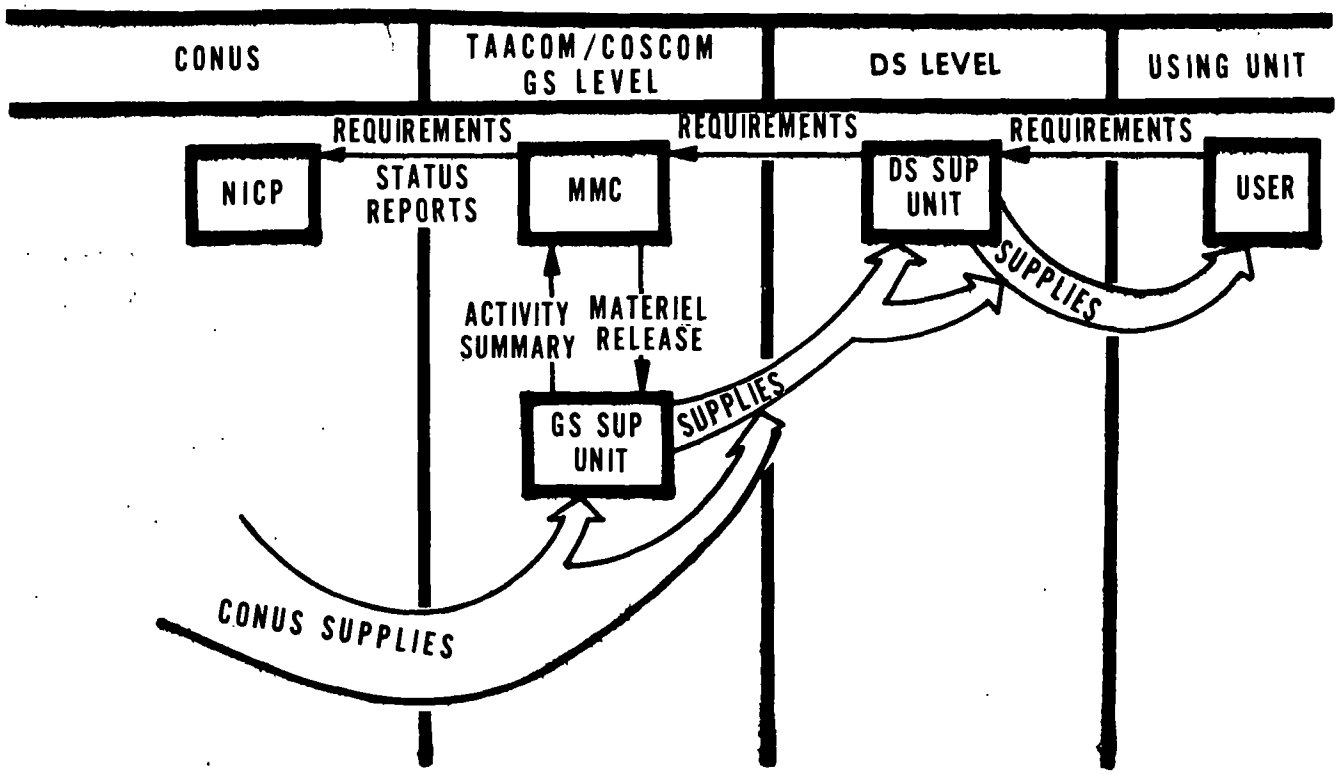


Figure 9-4. Flow of class II supplies (nonregulated) (schematic).

9-30. Class III Supplies

a. Class III supplies usually make up more than half the tonnage shipped to the theater. Petroleum fuels are normally handled in bulk. The theater petroleum distribution system stores and distributes bulk and packaged fuels. Packaged petroleum products such as greases, oils, and lubricants are stored and issued similarly to class II items. FM 10-67 contains details on class III distribution.

b. Pipelines generally provide the most economical, efficient, and effective means of moving large quantities of bulk fuels. The plan for distribution of liquid fuels makes maximum use of this method of delivery. When the situation is not stable or areas which the pipeline traverses are not secure, pipelines are vulnerable to interdiction and pilferage. Under these conditions, pipelines may not be the most effective means of distributing bulk fuels.

c. The theater petroleum supply system begins when bulk petroleum products are received in the theater. Large ocean tankers deliver bulk petroleum to the theater at marine petroleum terminals either across the dock or by means of submarine pipelines from offshore mooring facilities. Floating hoselines may be used in over-the-beach operations. Large lighters may move products from shipping to the beach when use of docks or submarine pipeline is not practicable. Tank farms receive the bulk petroleum supplies, preferably by pipeline.

d. A theater petroleum distribution system normally is intersectional and includes: discharging facilities and dock manifolds at ports, water terminals, and other points of entry; a base petroleum laboratory; inland tank farms, terminals, and other petroleum storage facilities; pump stations; and pipelines that extend from points of entry as far forward as practicable into the combat zone. Figure 9-5 shows such a system schematically. The system may be manned by a variety of petroleum operating and supply brigades, groups, battalions, and companies; laboratory detachments; and transportation units (to supplement or in lieu of pipelines).

e. Petroleum fuels are filled in containers (bulk fuel-containers larger than the 55 gallon drum; packaged fuel—55 gallon drums or smaller and 500 gallon collapsible tanks) at petroleum terminals of the theater petroleum distribution system. Packaged fuels generally are limited to the minimum essential

for continuous support and operational necessity. When petroleum fuels must be packaged, the bulk reduction operations are performed as near to the intended consumer as practical.

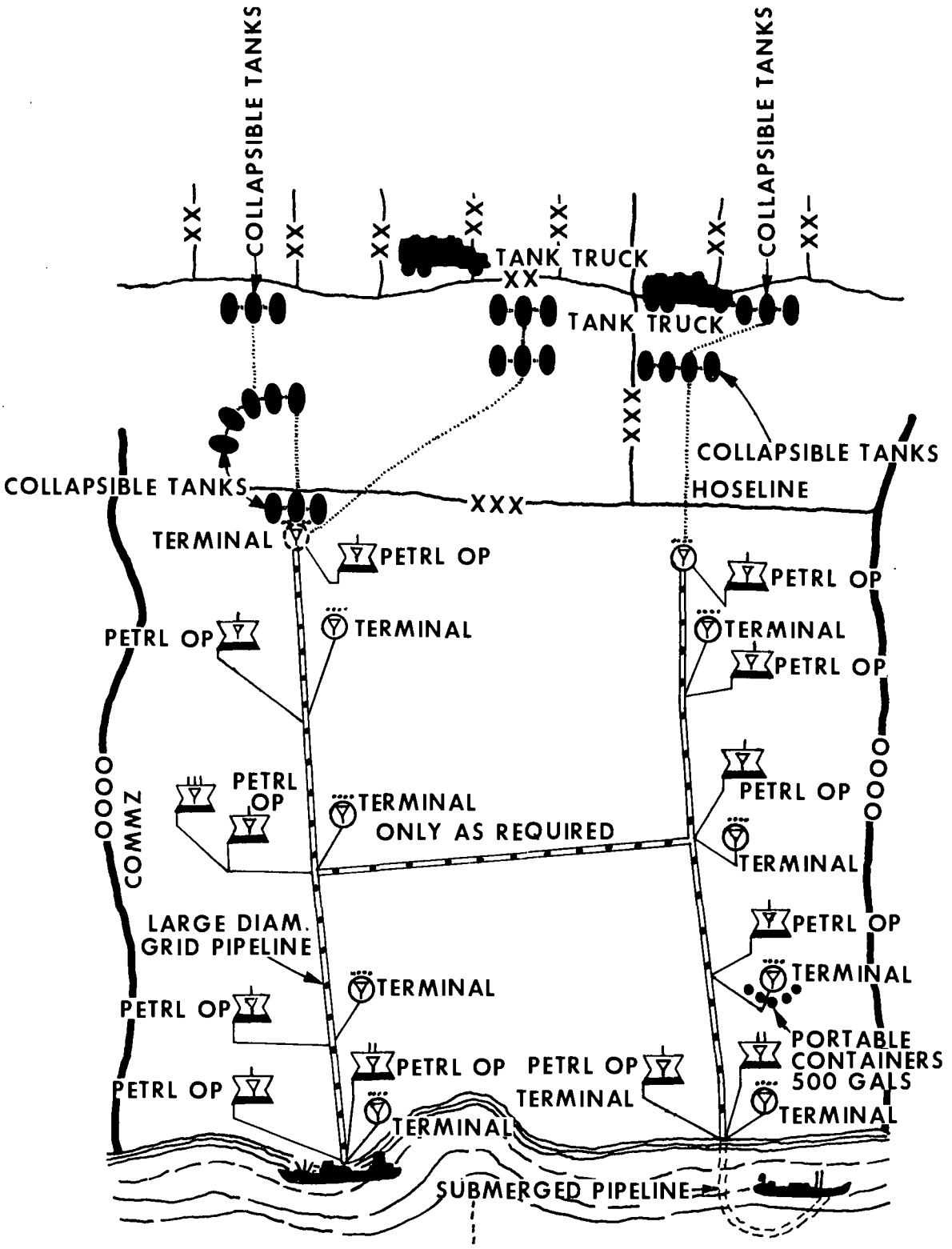


Figure 9-5. Theater pipeline system (schematic).

f. Specially designed organizations operate the bulk petroleum distribution system in a theater of operations.

(1) In the COMMZ, depending on the magnitude of the petroleum distribution system needed to support the theater petroleum requirements, a petroleum brigade (TOE 10-201) or a petroleum group (TOE 10-202) normally operates the theater petroleum distribution system. When a petroleum brigade is authorized, it is normally assigned to the TAACOM in which area the ocean terminals and bulk storage and pumping facilities are located. The brigade provides command control over the operations of two or more petroleum groups. In a large theater of operations a petroleum distribution command may be required and assigned directly to TA for control.

(2) In the combat zone, the petroleum supply battalions assigned to support groups operate the bulk petroleum supply system. In the event the corps is expanded to include the maximum number of divisions, or if the terrain or tactical situation preclude optimum control by the respective support group commanders, the establishment of a petroleum group headquarters may be necessary. In divisions, the supply and transport battalion operates the system. The DS supply and service battalions serve nondivisional units.

(3) Within the framework of current doctrine, a joint petroleum office (JPO) is at theater headquarters, with subarea petroleum offices (SAPO) established as required. The JPO and/or the SAPO advises on and coordinates petroleum planning and policy matters to include coordination with military sealift command (MSC) and quality assurance representatives, advises on the allocation of pertoleum products and facilities, and assures that the requirements of each of the military services are included in the total theater petroleum requirements. The JPO receives and consolidates theater requirements for bulk petroleum products and packaged fuels submitted by the military services or from the SAPO, if established, and submits the consolidated petroleum slate, i.e., requisition to the Defense Fuel Supply Center of the Defense Supply Agency in CONUS for supply (purchase) action.

g. Under optimum conditions, bulk petroleum products are scheduled through the theater distribution system at a constant rate that may be changed only by requests placed on controlling headquarters to adjust or alter deliveries by consuming activities. The TAACOM, by means of its petroleum brigade or petroleum group, establishes and operates petroleum bulk fuel terminals as far forward as practicable, to include the corps area. The COSCOM supervises petroleum support for the corps and coordinates supply operations with the TAACOM in the COMMZ.

(1) In the COMMZ, the petroleum operating battalions use their petroleum operating companies to deliver bulk fuel to DS supply and service battalions for issue to consumer units. Petroleum operating companies, operating terminals of the theater petroleum pipeline system in the corps, supply bulk and packaged fuels to the petroleum supply battalions of the COSCOM.

(2) In the corps, the COSCOM petroleum supply battalions deliver bulk products both supply and service company of the DISCOM and to DS supply and service companies in the corps for issue to consumer units (fig 9-6).

(*a*) Petroleum supply companies of the battalions receive, store, and issue bulk products at class III supply points and deliver bulk products by hoseline to major consumers.

(*b*) Medium truck companies (petroleum) of the battalions deliver bulk products from the class III supply points to DS supply units and divisions. Deliveries bypass intermediate storage locations whenever possible.

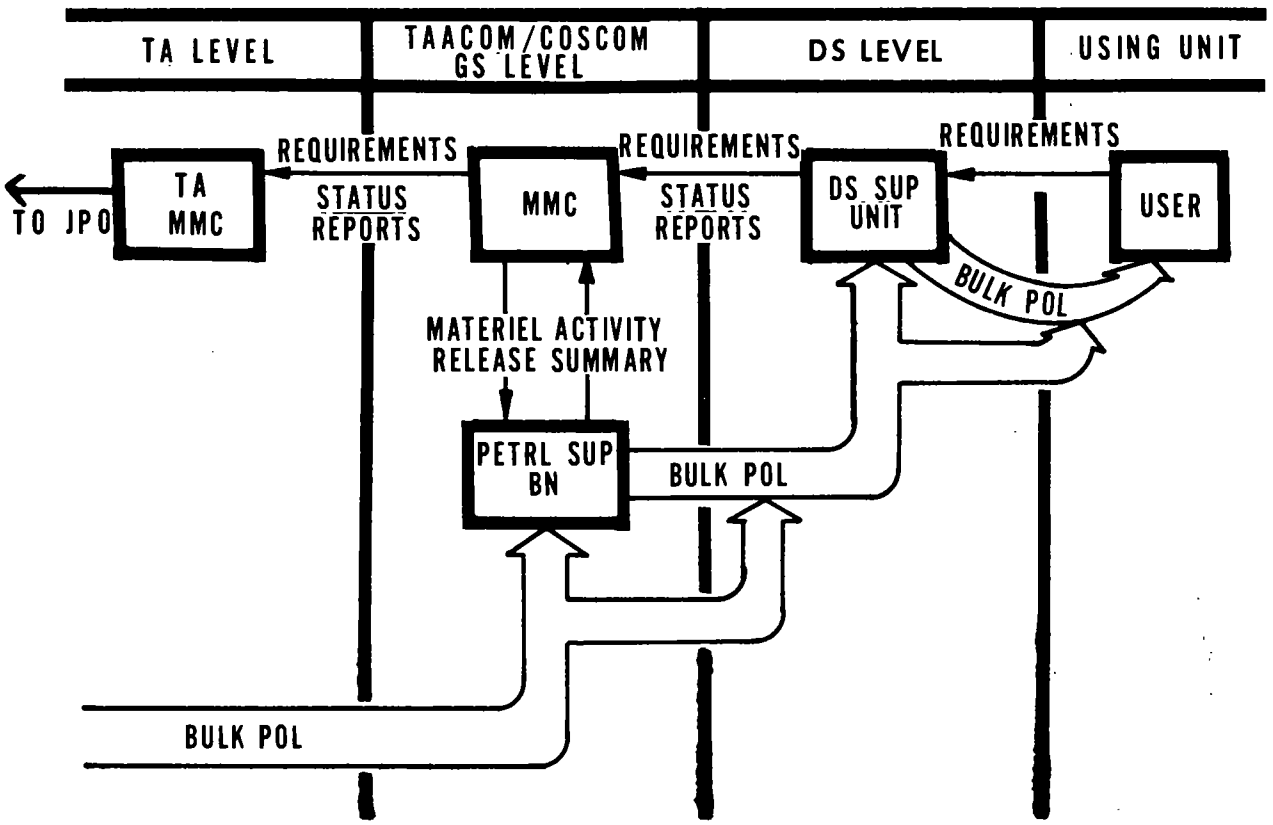


Figure 9-6. Flow of bulk petroleum (schematic).

h. The system supplies bulk petroleum by immediately replacing quantities issued and consumed. Status reports (or activity summaries), which substantiate issues of products made during any given period, are the basis for system replenishment. When and where controls are imposed, the objective is not to allocate or limit quantities of products, but to provide information to the command for decisions affecting diversions or other adjustments needed to satisfy requirements. The MMC coordinates movement plans with the MCC to assure the distribution pattern developed makes optimum use of all transportation modes, (except for pipeline transportation of bulk petroleum) available for support of the bulk class III movement requirement. Packaged products are programmed for distribution (para 9-25 through 9-27) as general cargo.

(1) Centralization of inventory control functions is at the COSCOM MMC in the combat zone. The MMC, unless otherwise directed, receives requirements (or forecasts) from the DISCOM, corps support groups, and nondivisional DS supply units, and receives activity summaries from GS petroleum suppliers. The COSCOM MMC computes requirements, maintains centralized cognizance over the corps inventory of petroleum, and provides data and summaries to the COSCOM staff on which to base decisions. The COSCOM MMC transmits activity summaries, which are the basis for necessary replenishment and supplemental requirements, to the TA MMC.

(2) The TA MMC receives activity summaries from the petroleum group. The center also provides reports required by the TA staff to monitor the performance of the system, approves supplemental requisitions from the COSCOM MMC, consolidates projected requirements in the form of planning estimates from the COSCOM and other US forces, and forwards the consolidated requirements to the JPO (fig 9-7).

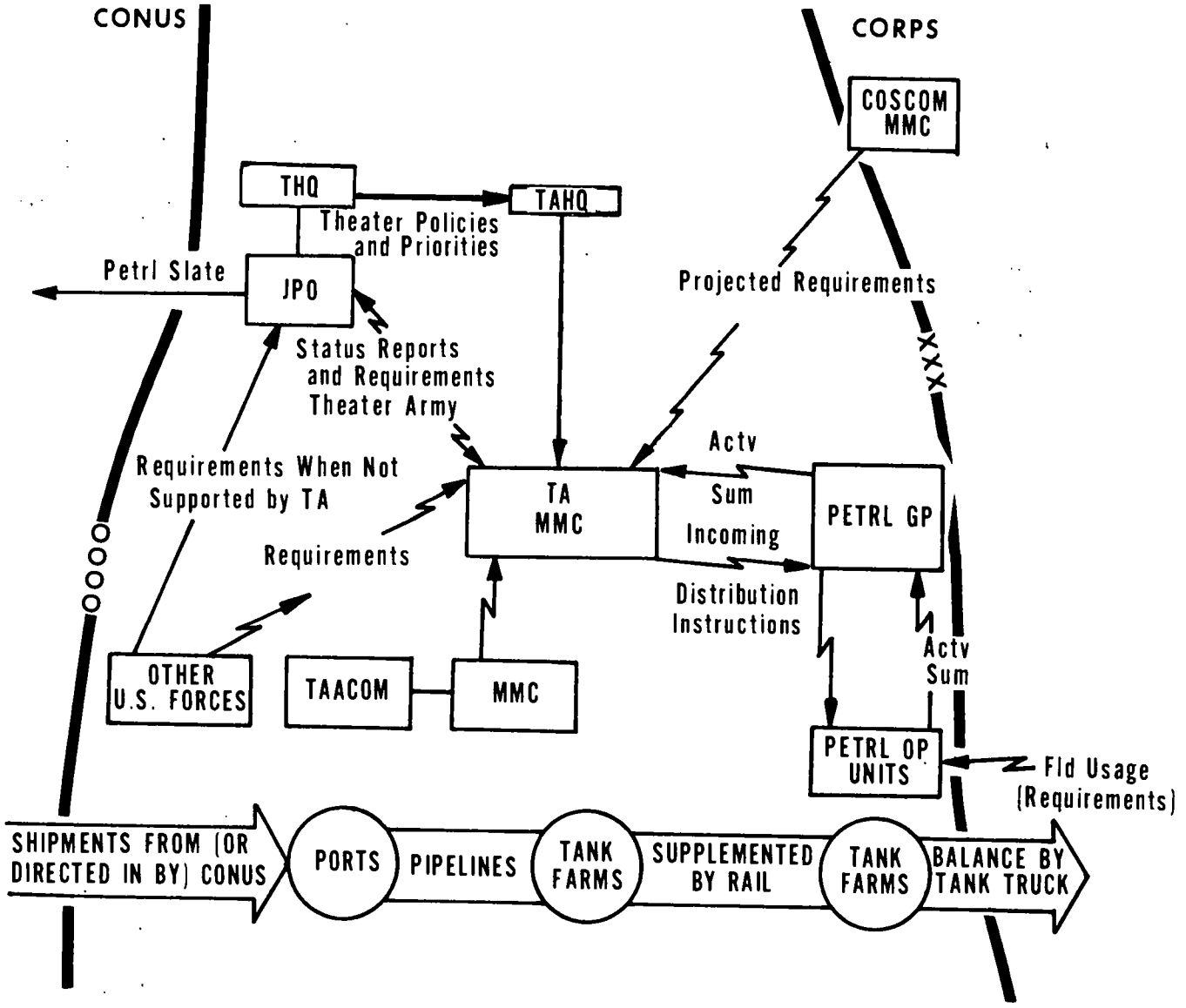


Figure 9-7. Petroleum requirements and distribution (schematic).

9-31. Class IV and Class VII Supplies

a. When not regulated, commodities in these classifications follow generally the system outlined for class II (para 9-29). If items are regulated or controlled, issue requires command approval, as shown in figure 9-8. The MMC advises the appropriate commander on availability of items. Upon command approval, the appropriate MMC issues shipping instructions to the storing GS unit, which makes shipment directly to the user.

b. While at present the class VII supply system operates as stated above, evolving general support concepts to provide combat (systems) oriented general support for materiel will have a significant impact on the class VII supply system. See paragraph 10-24 for details on these evolving concepts.

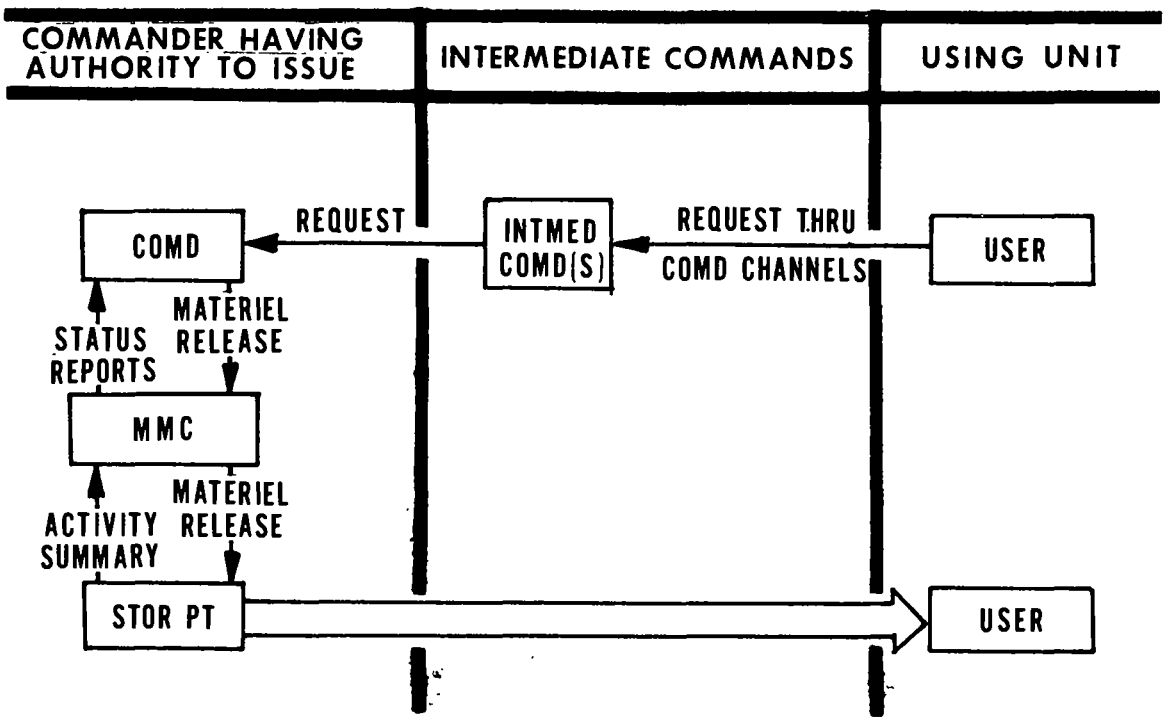


Figure 9-8. Flow of class IV and VII regulated items (schematic).

9-32. Class V Supplies

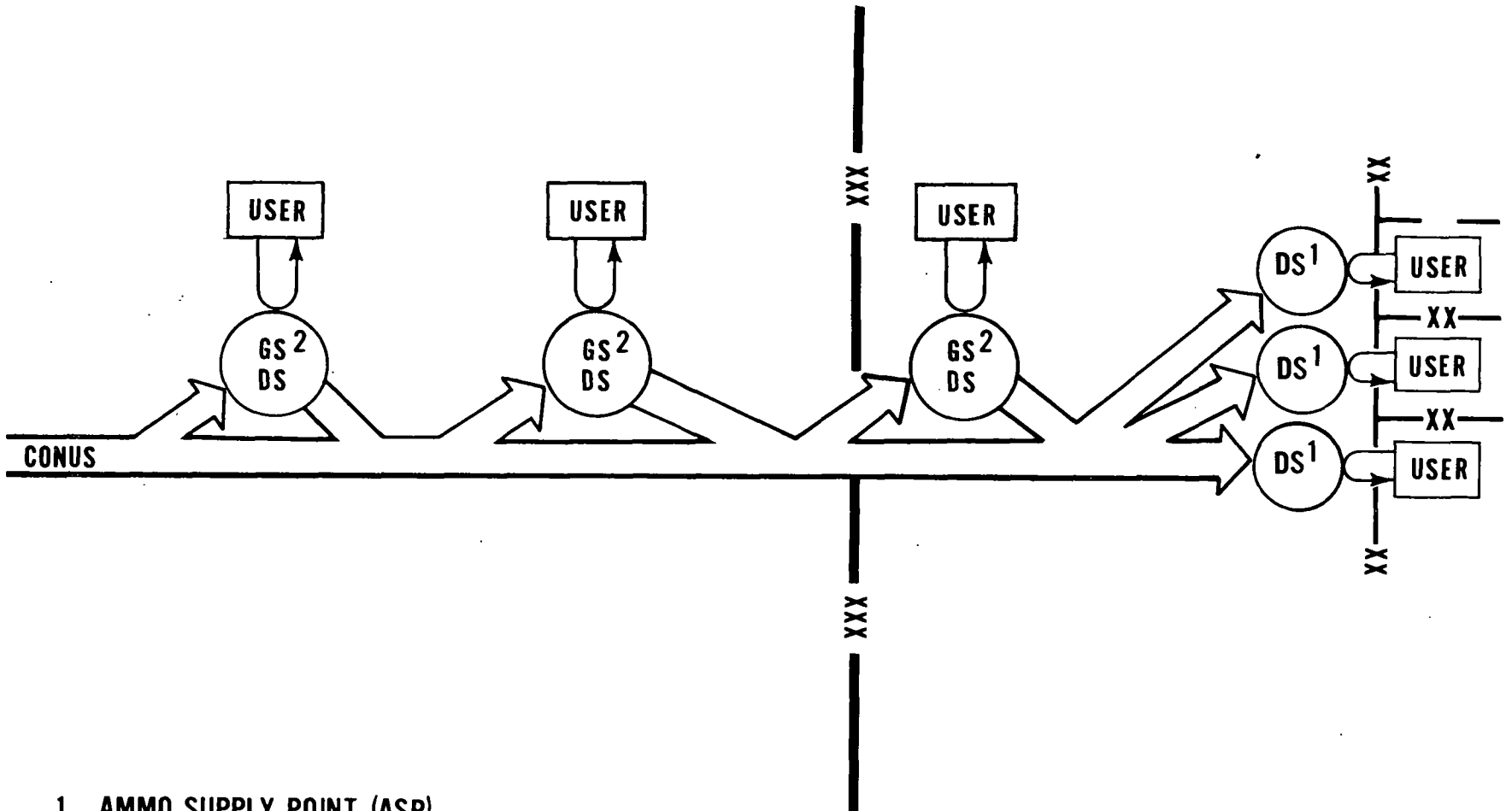
a. General. Supply of conventional and special ammunition comprises class V supply. Ammunition supply in the theater of operations is provided at the direct and general support levels. At both levels, conventional ammunition companies operate ammunition supply points (ASP) for conventional ammunition and special ammunition companies operate special ammunition supply points (SASP) for special ammunition. Staff supervision of ammunition supply is exercised by ammunition service staff personnel of the TA, TAACOM, and COSCOM headquarters. Ammunition service personnel in the missile and munitions branch of the TA, TAACOM, and COSCOM MMC perform class V supply management. These centers can also provide personnel to form a "Special Ammunition Logistical Element (SALE)" to be located at the headquarters (e.g., tactical operations center) of the senior commander concerned to aid in supply and resupply of special ammunition. Detailed information on ammunition service in a theater of operations is contained in FM 9-6.

b. Communications Zone. Direct and general support ASP/SASP are positioned throughout the COMMZ as necessary to support using units located within their area of responsibility in the COMMZ and to provide backup ammunition support to the combat zone.

c. Combat Zone. Direct support ASP/SASP normally are positioned forward in the corps area near the division rear boundary. Through coordination with the supported division ammunition officer, a direct support ASP may be established in the division tactical area to facilitate continuous support of the division's maneuver elements. General support ASP/SASP usually are positioned in the corps rear areas, as the tactical situation dictates. Primarily containing reserve stockage, general support supply points serve as a means to disperse stocks within the combat zone due to their rearward location; provide a source in the event the forward direct support supply points are destroyed; furnish replenishment shipments to forward supply points when requirements cannot be met by

CONUS; and support using units located in the corps rear area.

d. Shipment of Ammunition. Supply point distribution is the normal method of providing ammunition to using units. Conventional ammunition will be assembled in unitized (palletized and/or containerized) loads at the CONUS source of supply for distribution down to and including the direct support level in the combat zone. These loads are assembled in a manner consistent with the requirements for explosive compatibility that are prescribed in applicable Army directives. Figures 9-9 and 9-10 illustrate the flow of conventional and special ammunition. Maximum throughput is a basic characteristic of ammunition supply. The preponderance of throughput is from CONUS to direct support supply points in the combat zone. Air transport will be emphasized for throughput of special ammunition. Distribution usually varies according to the missions assigned each corps and any expenditure restrictions imposed. Since distribution of special ammunition depends on command decision, the desires of the tactical commander to whom these items are allocated govern throughput of special ammunition. In any situation, throughput of ammunition requires close coordination between the MCC and the MMC at the COSCOM and TA headquarters to insure ammunition is routed or rerouted to meet tactical changes. In addition, within the combat zone, close coordination between the COSCOM and ammunition group headquarters is needed to make necessary shifts of ammunition supply units to meet varying requirements.



1 AMMO SUPPLY POINT (ASP)

2 AMMO SUPPLY ACTIVITY (ASA)

Figure 9-9. Flow of conventional ammunition and high density guided missiles (schematic).

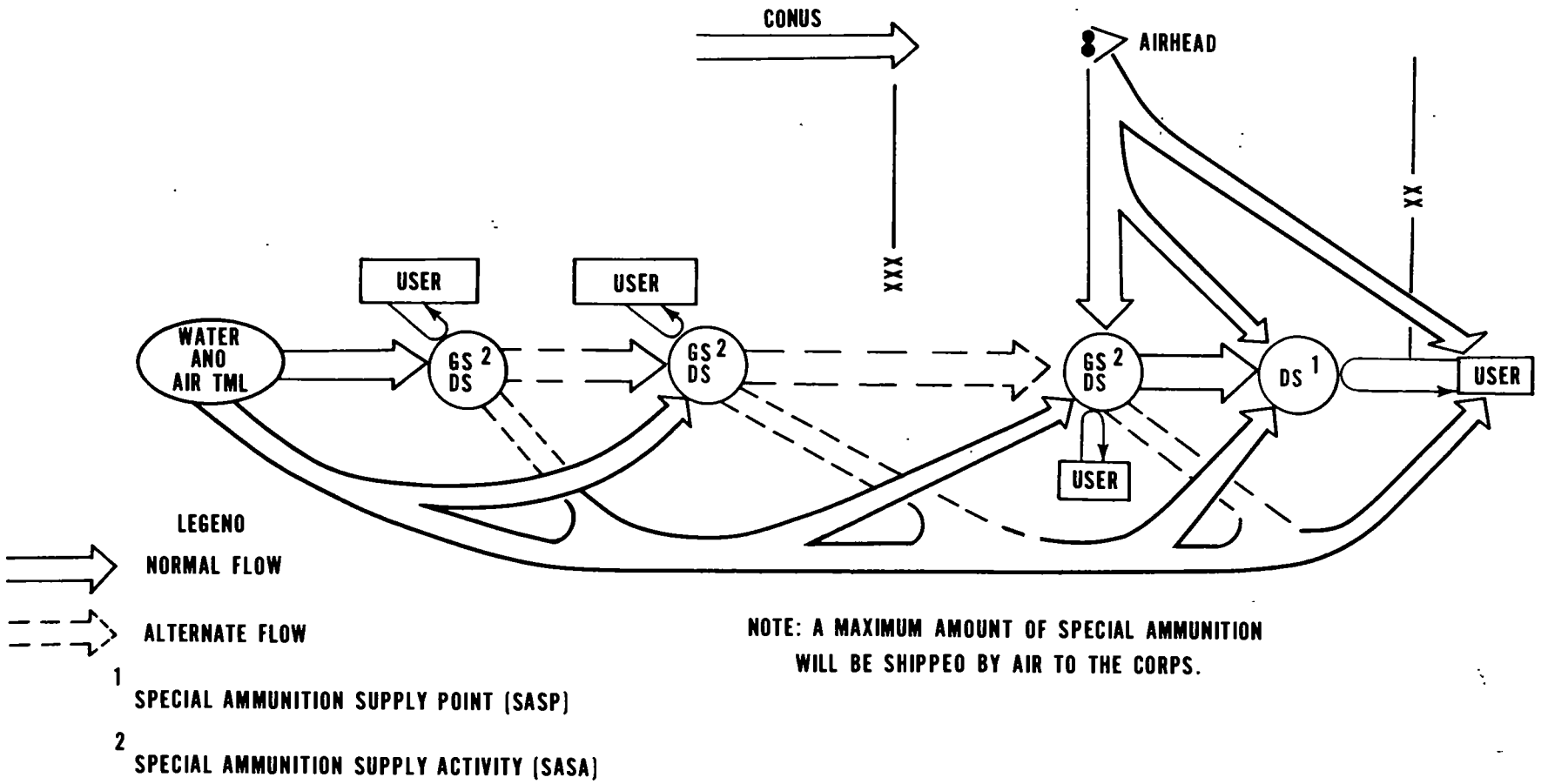


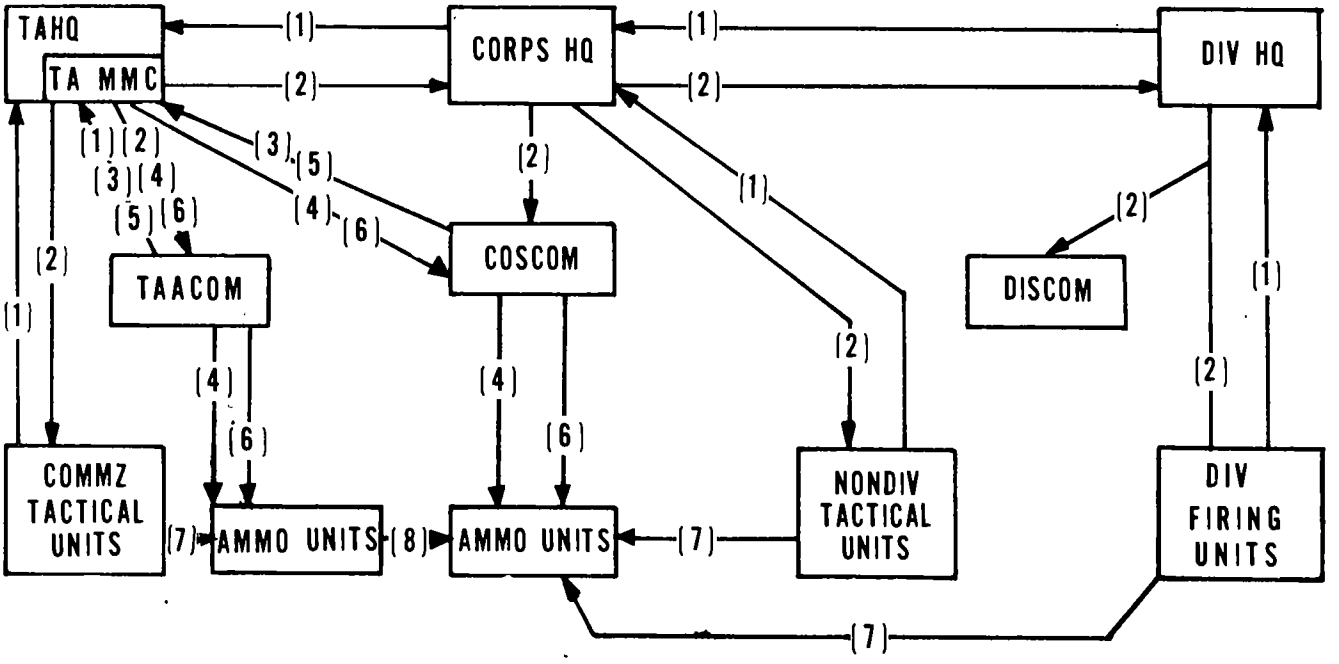
Figure 9-10. Flow of special ammunition low density, guided missiles, and special ammunition repair parts (schematic).

e. Conventional Ammunition Control. Procedures for control of conventional ammunition involve the basic load, required supply rate (RSR), and controlled (formerly available) supply rate (CSR).

(1) *Basic load.* The basic load is that quantity of ammunition which is authorized and required to be on hand within a unit at all times. Authorized by major commanders, the basic load enables the unit to accomplish its mission until normal resupply can be effected. Considerations in establishing basic loads include the unit mission, unit transport capability, and anticipated resupply time based on anticipated combat intensity. The basic load is continuously reconstituted as it is used. The basic load includes ammunition carried by the individual soldier, ammunition stowed in self-propelled weapons, ammunition carried in prime movers, and ammunition stowed at gun positions and in nearby unit dumps. The basic load is expressed in rounds, units, or units of weight as appropriate. The percentage of each kind of ammunition (e.g., high explosive, white phosphorous) is left to the discretion of the unit commander when availability permits.

(2) *Required supply rate.* The RSR is the amount of ammunition estimated to be required to sustain operations of any designated force without restriction for a specified period. The rate is expressed in terms of rounds per weapon per day for ammunition items fired by weapons and in terms of other units of measure per day for bulk allotment and other items. Tactical commanders use this rate to state their requirements for ammunition to support planned tactical operations at specified intervals. The required supply rate is submitted through command channels. Each tactical commander develops RSR and submits them to his next higher headquarters. Figure 9-11 illustrates the routing of RSR.

(3) *Controlled supply rate.* The CSR is the rate of consumption of ammunition that can be supported, considering the supplies, transportation, and facilities available for a given period. For ammunition items fired from weapons, this rate is expressed in rounds per weapon per day. For other items, such as antitank mines, handgrenades, demolition explosives, etc., the rate is expressed in terms of units of measure for specified items, e.g., per day, per week. The theater army commander announces to corps commanders the CSR for each item of ammunition. Each tactical commander announces a CSR to his next subordinate tactical commander. Figure 9-11 illustrates the routing of CSR.



1 Required supply rate (consolidated at each command headquarters).
2 Controlled supply rate (recalculated by each command headquarters for subordinate units).
3 Ammunition availability (quantities on hand and immediately due in).
4 Ammunition credits (constitute authority to request shipment of ammunition).
5 Request to ship ammunition (prepared by support elements).
6 Stock levels (based on controlled supply rates)
7 Ammunition pickup (supply point distribution).
8 Backup support to combat zone.

Figure 9-11. Flow of conventional ammunition and routing of required and controlled supply rates (schematic).

f. Special Ammunition Controls. A discussion follows in (1) through (3) below, concerning the necessarily rigid controls over special ammunition (fig 9-12).

(1) *Special ammunition load.* The special ammunition load (SAL) is a specific quantity of special ammunition to be carried by a delivery unit. The SAL is not a fixed quantity, as is a basic load, but is established by command action, depending on the mission, the tactical and logistic situation, and the capability of the unit to transport and use the load. Replenishment of the SAL is not automatic, but requires a command decision based on the situation, mission, and capability of the unit. The SAL may vary from day to day and among similar delivery units.

(2) *Special ammunition allocation.* A special ammunition allocation is the designation, for planning purposes, of the special ammunition which a commander may expend when the use of such ammunition is authorized.

(3) *Special ammunition stockage.* This is a specific quantity of special ammunition to be stocked in an ammunition service support unit or installation. Establishment of this stockage is by command decision, based on the tactical and logistic situation and the capability of the units concerned to receive, store, maintain, and issue the ammunition. Special ammunition stockage has no fixed quantity or rate, and replenishment of this stockage is accomplished by command decision.

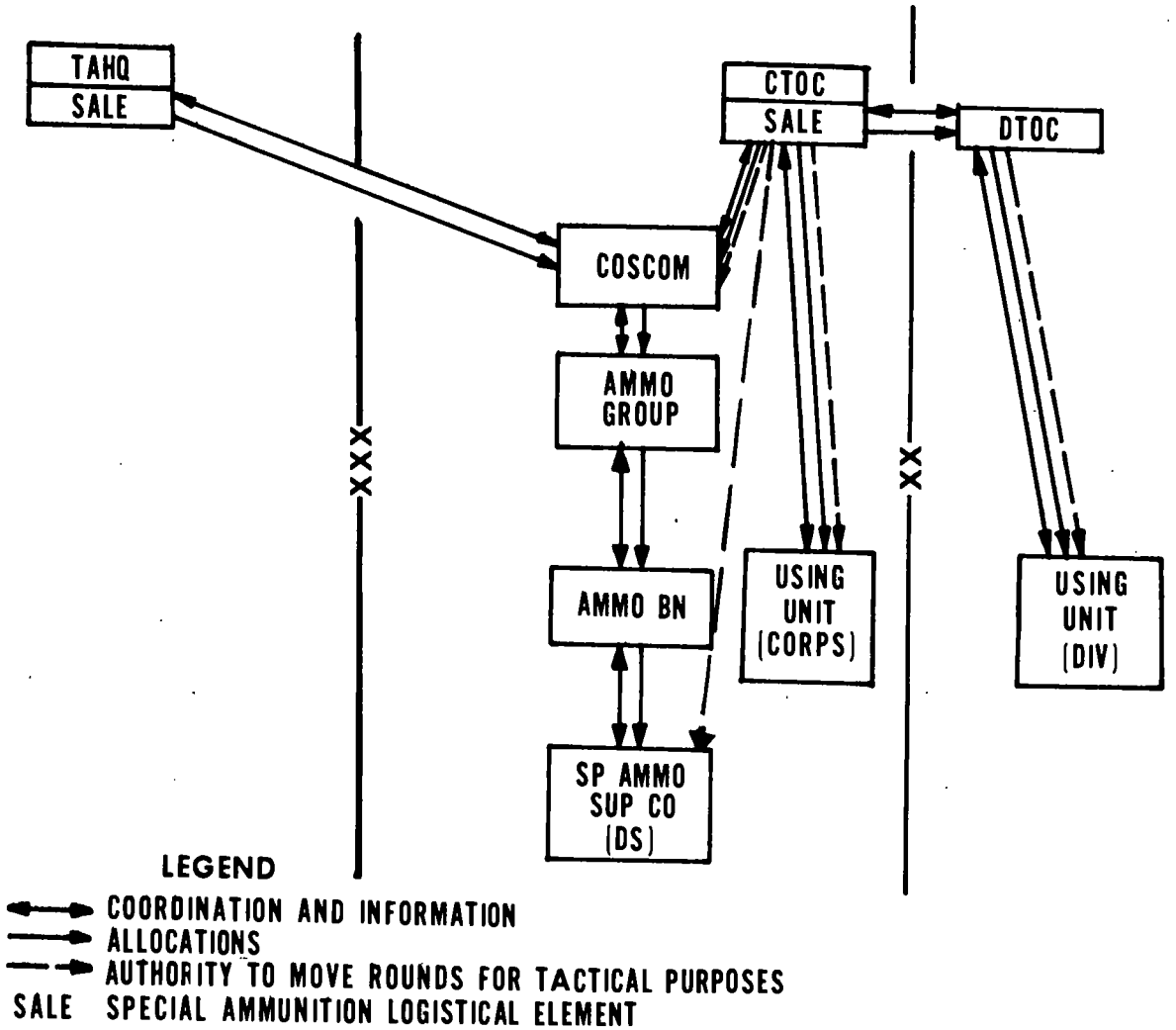


Figure 9-12. Control of special ammunition in the corps (schematic).

g. Tactical Control of Ammunition.

(1) *Conventional ammunition.* The theater army commander allocates ammunition to the corps. The corps commander suballocates to divisions. Each tactical commander allocates ammunition based on the main and supporting tactical efforts. Allocation information received from each tactical commander provides the basis for supply control information at each materiel management center.

(2) *Special ammunition.* The allocation of special ammunition is from commander to commander (i.e., theater army, to corps, to division commander). As a result, the commander of a logistic headquarters can provide only the means to carry out the desires of the tactical commander. A special ammunition logistic element (SALE) is formed at theater army or air defense brigade headquarters, and at corps tactical operations centers (TOC). The SALE is designed to be immediately responsive to the appropriate tactical commanders in expediting the supply of special ammunition.

9-33. Class VI and Class VIII Supply

a. Paragraph 9-43*b* discusses Army and Air Force Exchange Service supplies.

b. Paragraph 17-1*a* (6) discusses medical supply.

9-34. Class IX Supply

At present, requirements and supply distribution for repair parts (fig 9-13) follow a system similar to that for class II items. However, evolving general support concepts to provide combat (systems) oriented general support for materiel will have a significant impact on the class IX supply system.

See paragraph 10-24 for details on these evolving concepts.

a. Direct support and general support maintenance elements initiate requisitions for repair parts for submission to the TAACOM and COSCOM MMC. The MMC releases stocks from one of the GS repair parts companies and coordinates the transportation requirement for movement. If none of the repair parts companies have the required items or quantities on hand, the MMC sends the requisitions to CONUS. The MMC, through cross-leveling operations, laterally transfers stocks from repair parts units having excess available stocks to repair parts companies requiring stock replenishment. The MMC also can direct distribution of repair parts stocks within the support groups.

b. Direct support maintenance units are the source of supply for repair parts requisitioned by the user. DS and GS units requisition all repair parts, including aircraft parts, through supply channels.

c. Recoverable and repairable components, modules, and repair parts are supplied by physical exchange of unserviceable for a serviceable item through DX procedures except for initial issues and issues to replace losses sustained during combat operations. (fig 9-14).

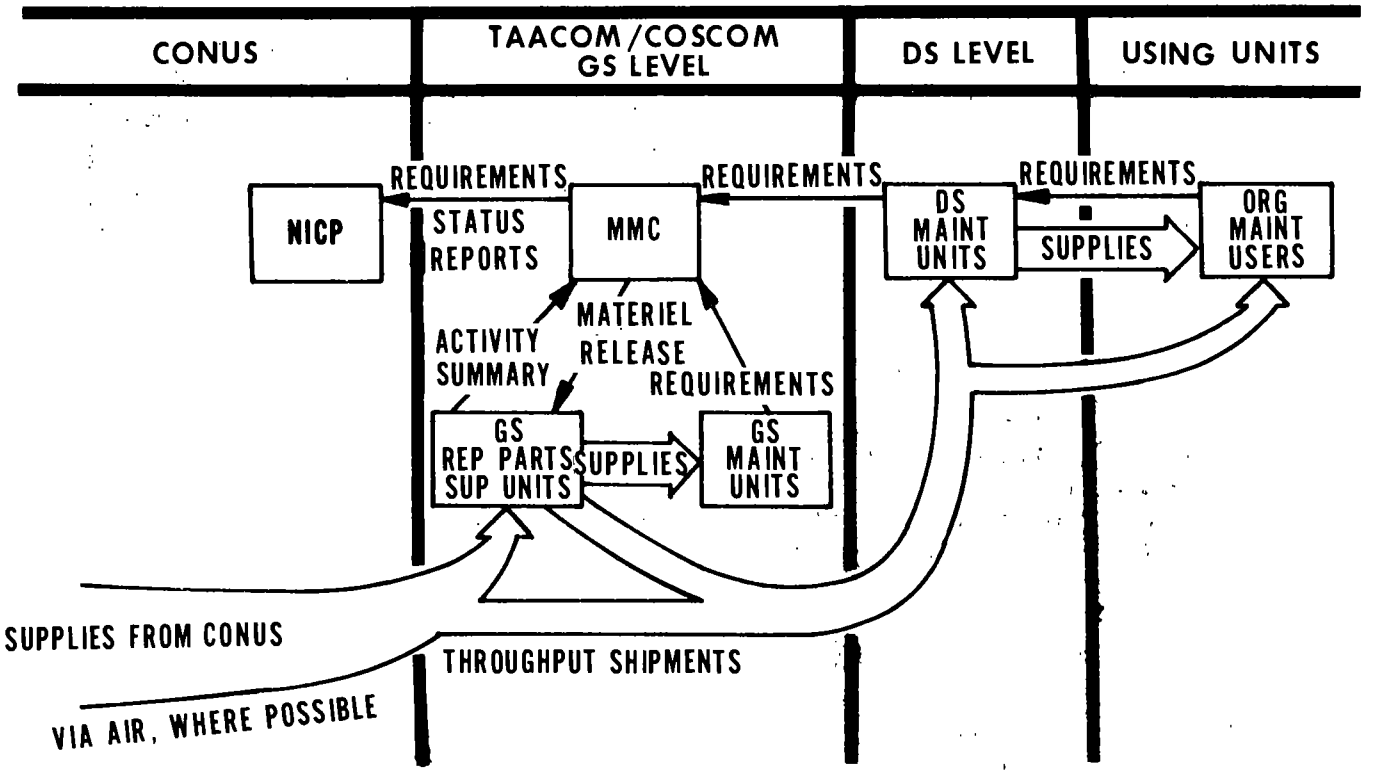


Figure 9-13. Flow of repair parts requirements and distribution (schematic).

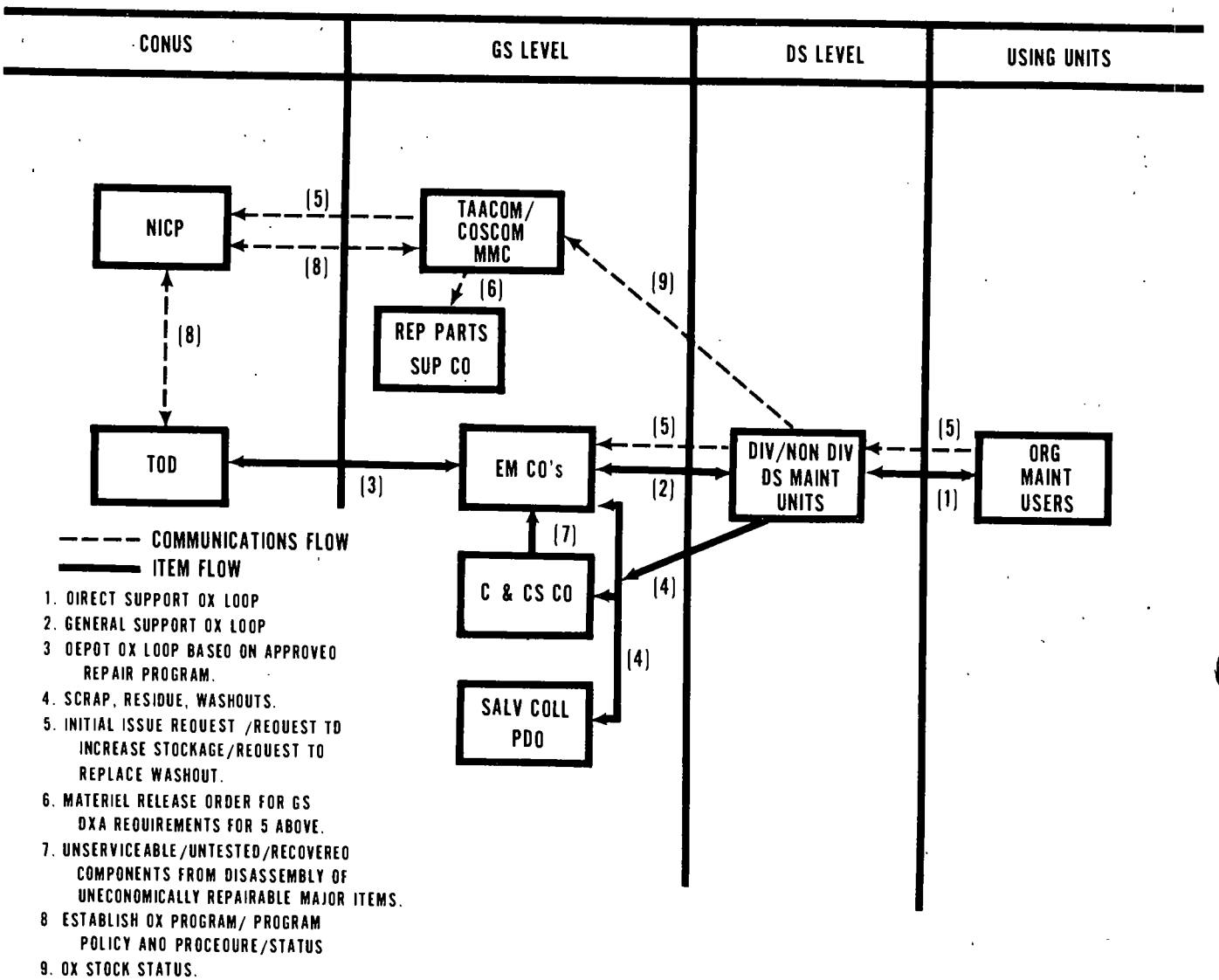


Figure 9-14. Direct exchange (schematic).

9-35. Class X Supply

The distribution of materiel not included in Classes I-IX required to support non-military programs, e.g., agricultural and economic development, is discussed in paragraph 9-40.

Section VII. SUPPLY, MISCELLANEOUS

9-36. Adjutant General Supplies

Adjutant general (AG) supplies consist of blank forms and publications. The AG supervises matters pertaining to printing (except map reproduction and printing for psychological operations), including policy and procedure for control, production, and distribution of military publications. The AG pinpoint distribution system provides the issue of official publications to all units and organizations worldwide (AR 310-1). In addition, each item of

equipment that is packed and shipped normally includes the initial issue of technical publications necessary for installation, operation, and maintenance of the equipment.

9-37. Air Force Supplies

The Air Force may be responsible for procurement and distribution of certain common supply items for all military services in a theater of operations. Theater air installations store such items. The air installations make authorized issues to Army forces through the Army distribution system under applicable interservice support agreements with appropriate reimbursement.

9-38. Animals

The procurement, requisition, and distribution of animals are responsibilities of the procurement activities of the various headquarters (except for test animals procured through medical channels for the Army Medical Department). Animal supply activities include requirements for dog teams in cold regions, guard dogs for installations in some areas, and mounts and pack animals in remote and isolated areas. Accordingly, animal supply activities are on an "as required" basis.

9-39. Captured Materiel

Captured materiel can be a source of logistic support, but it usually imposes an unprogrammed support burden on logistic troops. Procedures for proper handling and exploitation of captured materiel are contained in FM 30-5.

9-40. Supplies for Civilian Use and Consumption

a. Military sources may provide some supplies to the civil population if the resources of the territory are inadequate. Provision of military supplies will not be to an extent that jeopardizes military operations. In addition, civil agencies of the US Government and private charitable organizations may provide supplies for civilian consumption which may or may not be distributed through military channels. Supply in support of CA activities includes supplies for civilian relief and supplies for economic aid. Civilian relief supplies comprise such commodities as food, clothing, shelter, medical supplies, and other items furnished for control of disease and relief of civilian distress. Economic aid supplies consist of such items as coal, petroleum, capital goods, raw materials, railroad equipment, and fertilizers. Supplies and services may be necessary to establish or restore information services in the area (e.g., newsprint, printing facilities, radio broadcast and reception, motion pictures). The theater CA command or the CA units performing CA operations in the corps area and the COMMZ estimate requirements and supervise distribution of supplies. The civilian economy may be a valuable source of essential supplies, and this factor is a consideration in assigning priorities to civilian supply requirements.

b. The TA performs procurement of CA supplies in accordance with the theater policies. Civil affairs supplies are a consideration in making allocations of shipping and storage space.

c. For details on CA supply, see FM 41-10.

9-41. Psychological Operations (PSYOP) Supplies

Face-to-face persuasion, radio, television, motion pictures, printed matter, and loudspeakers are media for conducting PSYOP. Equipment and expendables may come from either US or indigenous sources. Experience indicates that US Army PSYOP organizations will make extensive use of indigenous supplies and installations. Planning should include the location, types, and condition of local facilities—such as radio stations and printing plants—that may be rehabilitated and used by US forces. Planners weigh the availability of usable local resources against the task of transporting US equipment to the area of operations.

9-42. Religious Supplies and Equipment

Two categories of supplies and equipment are available to chaplains. Standard supplies and equipment, such as altar brass, portable altar sets communion sets, wine, and candles come through normal supply channels. Nonstandard supplies—commercial items that are not type classified—come from appropriated and nonappropriated funds and donations.

9-43. Recreation Services and Exchange Supplies

a. Recreation services supplies consist of items used in the welfare, recreation, and morale program for service personnel. In keeping with an austere philosophy such items will be held to a minimum. Each unit normally takes overseas an initial supply of recreation services equipment, accessories, and repair parts. Resupply is by requisitioning through supply channels.

b. Army and Air Force Exchange Service (AAFES) supplies consist of items for sale to troops and other authorized individuals. Supplies may be available through local procurement, through transfer from theater stocks, or through requisition to the Army and Air Force Exchange Service in the CONUS. Available shipping space dictates allocation and shipment of supplies to the theater. The Army and Air Force Exchange Service determines requirements; procures, stores, and distributes supplies; and operates the resale facilities. In cases where no AAFES exists, such services are performed by sales detachments of

supply and service battalions in the COSCOM and supply and service companies of area support groups in the TAACOM.

9-44. Information Supplies

Information supplies consist of items necessary to support information programs and to provide education services. These supplies include printed materials, motion pictures, radio, and television broadcast stations, receiving equipment, and transcriptions. Most items come through normal supply channels. In some cases, procurement, storage, maintenance, and distribution of these supplies are through special channels and facilities.

9-45. Excess and Surplus Supplies

Excess supplies are those that exceed the quantity authorized for a particular organization, supply installation, activity, or area. Surplus supplies are those over and above the requirements of all government agencies.

a. Excess supplies may result from changes in plans or unanticipated decrease in demand or consumption. Units segregate, inventory, and report their excess supplies to the next higher echelon in the supply chain. Determination and elimination of excess supplies are continuing functions of each unit and supply establishment. Evacuation and redistribution of excess supplies are through normal supply channels.

b. Units report and dispose of surplus property in theaters as prescribed in appropriate regulations.

9-46. Salvage

Salvage is property that has some value in excess of its basic materiel content but which is in such condition that it has no reasonable prospect for use, for any purpose, as a unit; and its repair for use as a unit is clearly impracticable. Such items are evacuated to a salvage collecting point which, through coordination with the appropriate MMC, receives, processes, and disposes of scrap materiel and uneconomically repairable items designated for property disposal. AR 755-2 provides guidance on the disposal of unwanted materiel.

9-47. Topographic Operations

a. Theater headquarters determines topographic requirements based on the theater mission, supportive operations plans, and the theater commander's area of interest. The ACofS, intelligence of the ENCOM will recommend priorities of map supply and other topographic support and will task either the Defense Mapping Agency or the commander of the ENCOM organic topographic battalion accordingly. FM 5-146 details the nature and execution of topographic support.

b. Engineer topographic units execute all topographic support to all Army elements in the theater with the exception of—

(1) Observance and dissemination of meteorological data.

(2) Topographic operations executed by allied topographic units detached in support of US forces and not placed under the operational control of ENCOM.

(3) Map distribution within divisions and other units which do not allow their subordinate elements to establish direct accounts with supporting engineer units.

c. The engineer topographic battalion monitors all topographic support provided the theater army and maintains inventory control of theater map stockage, geodetic data, and terrain intelligence publications. Distribution to users of maps, geodetic data, terrain intelligence publications, and other topographic publications is achieved on an area basis by engineer map supply units established in the COMMZ and in each corps area. Each unit establishes accounts with supported commands and divisions. Division support commands receive divisional needs in bulk and provide division map issue points.

d. Equipment and expendables for topographic operations may come from either US or indigenous sources; in some cases procurement, storage, maintenance, and distribution of these supplies are through special channels and facilities. Maintenance of equipment should be accomplished by repair personnel assigned to topographic companies and due to the uniqueness and limited volume of equipment, repair to the DS level should be authorized.

9-48. Water Supply

Potable water production is an engineer service. The engineer at each level of command determines potble water requirements; finds, records, and develops water sources; treats water and dispenses it; coordinates inspection and testing procedures with the surgeon; and procures and maintains water supply equipment. The transportation system provides rail and over-water bulk transportation of potable water. The surgeon inspects and approves water sources and tests and approves treated water. Water equipment capacities and data on computation of requirements for potable water and potable water equipment are in FM 101-10-1 and TM 5-700.

a. The ENCOM is responsible for furnishing potable and non-potable water to installations in the COMMZ. The water supply company (TOE 5-67) assigned to the ENCOM provides nine water supply teams. The engineer construction battalion (TOE 5-

115) provides two water points for supplying potable water for other units, as required. The ENCOM, based upon COMMZ requirements, installs water supply systems. RPMA units, under the operational control of ENCOM, maintain these systems. The area support group, TAACOM provides the resources to transport potable and nonpotable water to the area.

b. In the combat zone, division and corps engineers provide water purification support as part of their GS mission.

9-49. Communications Security Logistics

a. The TACCOM performs the supply and maintenance functions with regard to COMSEC logistic support of the theater.

b. See AR 380-41 for details on control of COMSEC material.

c. For details on the maintenance of COMSEC equipment, see AR 750-1.

9-50. Supply for Stability Operations

Supplies for support of stability operations include materiel for US forces and host country forces and for military civic action and other CA activities in support of host country internal defense and internal development programs. Supplies and equipment may come from US, Allied, or host country sources. Procurement of supplies from host country sources in coordinated with responsible CMO staff section and CA units.

a. Supply planners will not have valid experience data for the wide variety of environments in which stability operations may be conducted. There is a need for early development of consumption factors, basic loads, stockage levels, and basis of issue to support a planned operation. There is also a need for development of similar factors for Allied and host country forces that may be supported wholly or partly from US military stocks. Planners should give early consideration to needs for special items because of long procurement lead times. When practicable, local procurement will be used to reduce transportation requirements.

b. It will be necessary to establish and maintain stockage levels of supply at echelons below those where such stockage is normally maintained. Static security posts and combat bases are examples of installations where stockage will be necessary on a continuing basis.

c. The US forces may be required to provide essential supplies to the civilian population. The population may include victims of insurgent attack and groups that have been relocated or concentrated for security reasons. Supply will normally be limited to food and medical supplies, but may include such necessities as clothing, construction materials, and fuel.

CHAPTER 10

LOGISTICS—MAINTENANCE

Section I. GENERAL

10-1. Introduction

a. General. The term "maintenance" includes all repair actions to keep a military force in condition to carry out its mission. Materiel maintenance is all action taken to keep materiel in a serviceable condition, restore it to serviceability, or update and upgrade its functional utility through modification. It includes inspection, testing, servicing, classification as to serviceability, repair, modification, overhaul, rebuild, and reclamation. The materiel maintenance functions, performed as an integral component of combat service support, include the plans and operations involved in maintaining materiel and determining requirements for evacuation.At the direct support maintenance level, the maintenance support mission also includes the responsibility to operate the direct exchange (DX) and the operational readiness float stocks in support of materiel users. At the general support maintenance level, the maintenance support mission also includes the responsibility to provide repair parts supply for items in the DX program coded for GS repair. Inherent in the maintenance mission is a dependence on the capabilities and responsiveness of using units and maintenance units in the force to discern and report deficiencies in materiel and to recommend corrective action through appropriate channels, to the US Army Materiel Command. The following paragraphs, 10-2 through 10-23, deal with maintenance concepts as they are presently being implemented, however, general support concepts are now undergoing revisions intended to provide combat (systems) oriented general support for materiel and combine general support maintenance and Class VII, IX, and DX supply. While specifically addressing general support, these concepts, if adopted, will have a significant impact throughout the materiel maintenance systems. Discussion of these evolving concepts is presented in paragraph 10-24 in order to give the reader an appreciation for and indication of the possible future direction of materiel maintenance.

b. Materiel Maintenance in the Field. Materiel maintenance activities in the field are those internal to theaters of operation and/or those performed by and in support of the missions of deployable commands, organizations, and units in CONUS or those deployed in oversea areas. Support maintenance activities sustain the operational readiness of the force. They activate and operate maintenance support procedures, in accordance with the plans and technical guidance provided by the appropriate national maintenance point (NMP). to maintain in a serviceable condition, materiel sufficient to satisfy prescribed operational requirements. Field materiel maintenance activities are primarily concerned with the conduct and management of the support categories of materiel maintenance operations (para 10-7).

c. Maintenance Engineering. Maintenance engineering commences with the development of a statement of need or requirement for new materiel and continues until the equipment is phased out of the Army inventory. The objectives of maintenance engineering are to—

(1) Utilize integrated logistic support concepts to minimize requirements and costs of logistic support of materiel being introduced into the inventory by assuring that full consideration is given to logistic support implications of proposed equipment by combat and materiel development activities during the conceptual, validation, development, and production phases of its life cycle.

(2) Develop or assure the development and maintenance of a balanced logistic support program to sustain the materiel in the inventory in a mission-ready condition in a timely, effective, and economical manner.

d. Maintenance Management.

(1) Maintenance management is the process of establishing maintenance objectives (para 10-2) and the planning, obtaining, and organizing, directing, coordinating, and controlling and evaluating the use of resources to accomplish these objectives.

(2) Maintenance management includes forecasting the maintenance workload and determining the personnel, training, tools, Test, Measurement, and Diagnostic Equipment (TMDE), calibration equipment, facilities, funds, spares and repair parts, other maintenance supplies, technical data, and management information and procedures

needed to effectively and economically accomplish that workload on a timely and responsive basis.

(3) The periodic evaluation of maintenance concepts, policies, doctrine, plans, and procedures to insure that they provide the most effective maintenance support for technical equipment is a function of maintenance management. The technical supervision and management of major maintenance programs and activities are included in these evaluations.

(4) A primary function of maintenance management at the user or organizational maintenance level is to insure that adequate time is allocated and/or scheduled for the performance of maintenance training and maintenance operations, particularly those involved in the performance of preventive maintenance (PM) (DA Pam 750-1 and FM 29-2).

e. Terminology. Commonly used maintenance terms are defined and explained in AR 310-25, AR 750-1, and FM 38-5.

f. Enemy Action. Paragraph 2-3*b* discusses the effect of enemy nuclear, biological, and chemical operations on maintenance facilities and activities.

10-2. Objectives of Maintenance

a. The overall objective of materiel maintenance is to support the combat readiness and effectiveness of the Army by sustaining weapons and equipment in a mission-ready condition as effectively, responsively, and economically as possible.

b. Supporting the overall objective are subobjectives to —

(1) Establish and effectively use preventive maintenance programs to predict, prevent, and correct incipient equipment failures.

(2) Reduce repair parts resupply requirements by the timely repair and return to service of direct exchange procedures.

Section II. MAINTENANCE POLICIES AND PRINCIPLES

10-3. Maintenance Principles

a. Maintenance planning must be closely integrated and realistic with respect to current supply consumption rates and the availability of supplies. An inadequate maintenance organization imposes an increased requirement on the supply system. Conversely, inability of the supply system to replace unserviceable equipment requires greater maintenance effort to return a larger portion of these items to serviceable condition. Proper maintenance of equipment increases its period of economical usefulness, reduces supply requirements for replacement equipment, and conserves resources for other purposes. Effective maintenance support thus depends on responsive supply support.

b. The provision of maintenance support and maintenance supplies to using organizations by DS units is a basic logistic principle. Adherence to this principle results in fewer requisitions on supply units. It also permits faster supply support to using units and improves inventory control. In addition, certain end items, e.g., tanks, are delivered through maintenance channels, permitting inspection to insure that these items are combat serviceable when issued. Procurement and storage of repair parts and end items, and their distribution to maintenance activities, are functions of supply agencies.

c. The maintenance system is most efficient when founded on sound preventive maintenance practices in using organizations. This includes correct operation and use of equipment, and early detection and correction of equipment failures.

d. A system of recovery and evaluation is established for equipment. This system permits evacuation of an item from a using unit to the category of maintenance at which it can be repaired and returned to the user, to the supply system or salvaged. For items having high scrap value or requiring depot maintenance, the ultimate destination may be CONUS.

e. Dispersion of DS maintenance units is normally lateral and in depth to provide close maintenance support to units being served. As far as practicable, DS maintenance units support the same tactical units throughout an operation. This improves liaison, understanding, and cooperation between supporting and supported units. Direct support maintenance is performed as far forward as is consistent with the tactical situation, time available, complexities of equipment, capabilities of personnel, and availability of repair parts and tools. It may be more desirable to move maintenance personnel to the equipment than to move the equipment to maintenance personnel. Such support in the brigade support area is coordinated by a forward area support coordinating office (FASCO) of the supporting DISCOM.

f. General support maintenance facilities normally are situated to facilitate repair of equipment beyond the capabilities or the capacity of DS units.

Dispersion of GS units must be consistent with transportation resources for evacuation of unserviceable equipment and with the threat of enemy attack.

g. Depot maintenance is not performed in a theater of operations unless by specific exception approved by DA. Items requiring depot maintenance are evacuated to a CONUS depot (FM 29-24), if appropriate, or disposed of through C&CS companies by cannibalization or property disposal offices in accordance with appropriate regulations.

h. Direct support maintenance units provide technical assistance to users of equipment. Technical assistance includes training in operation, use, maintenance, and support of equipment; guidance in logistic planning; liaison; and introduction of new equipment and repair parts. Applicable programs include—

(1) The DA formal technical assistance program as authorized by AR 700-4 and AR 750-1. This regulation prescribes how to obtain the services of military and civilian technical specialists who provide on-the-ground advice and assistance in equipment maintenance and supply.

(2) Policies and procedures that Army commands and agencies follow to insure that the Army has trained and qualified personnel to operate and maintain new or modified systems and equipment are contained in AR 71-5 (new equipment training).

(3) While maintenance unit commanders must be aware of the formal DA Technical Assistance Program, it cannot substitute for specific programs tailored to the requirements of supported units to include frequent visits to supported units by liaison parties. Detailed guidance for the maintenance unit technical assistance program is contained in FM 29-23 and 29-30-1.

(4) The maintenance assistance instruction team (MAIT) program has been established to augment division and higher commander's capabilities for providing maintenance and associated logistic assistance and instruction to organic, attached, and supporting units. This program complements efforts of the aforementioned program. Policies and procedures for the MAIT program are contained in AR 750-51 (para 10-13*c*).

10-4. General Maintenance Policies

a. As a general policy, maintenance will be performed at the location of equipment operation or failure to the maximum extent consistent with the tactical situation and the cost-effective use of maintenance resources. This policy is intended to facilitate the attainment and maintenance of established readiness of objectives and increase the self-sufficiency of operating units. To support this general policy, emphasis is placed on preventive maintenance (DA Pam 750-1) and the design of equipment for modular maintenance so that maintenance tasks allocated to the organizational and direct support categories of maintenance (para 10-7) can be accomplished by the replacement of easily removed and installed modules (components, assemblies, and sub-assemblies) which do not require critical adjustment, calibration, or alignment before or after installation or extensive post-installation testing or run-in. Maintenance tasks involving the replacement or repair of piece-parts which constitute these modules are allocated to higher categories of maintenance, e.g., general support and depot. The authorization of an integral direct support capability to operating units, the provision of mobile contact teams by support maintenance units to make on-site repairs, and the expanded use of direct exchange (DX) techniques (fig 9-14) and operational readiness float (ORF) also support this general policy.

b. Maintenance Float Support. There are two types of maintenance float authorized. These are operational readiness float (ORF) and repair cycle float (RCF).

(1) The repair cycle float is established to permit withdrawal of equipment from using organizations or commands for scheduled cyclic depot maintenance and the repair at depot maintenance facilities of crash-damaged aircraft without detracting from the materiel readiness of the organization or command. The RCF is used to extend the economic service life of Army materiel by providing for its timely depot maintenance on a cyclic basis. Quantities of RCF assets as authorized by ODCSLOG, DA are maintained within the supply system to provide exchange assets to using organizations or commands for equipment entering DA scheduled depot maintenance programs and for those crash-damaged aircraft evacuated to depot maintenance facilities for corrective maintenance.

(2) Operational readiness floats of end items of equipment are established to extend the capability of support maintenance units to respond to the materiel readiness requirements of supported units. Serviceable equipment from ORF assets are provided supported units in exchange for unserviceable like items of equipment which cannot be repaired by support maintenance activities within specified time limits. When the supply delivery date for replacement of an item lost, destroyed, or determined uneconomically reparable does not meet the operational requirement date, upon approval of the division or higher level commander having command of both the supporting and supported unit, the

supported unit commander, in an emergency, may obtain a float item by submitting a statement indicating that the item is required by his unit to accomplish its mission. Theater army and corps commanders establish policies for the positioning of operational readiness floats within their respective commands, based on recommendations of their staffs and on policy provided by higher authority. Normally, when the density of ORF assets permit, operational readiness floats are established for the exchange of mission essential items at the DS maintenance level. Materiel management centers (MMC) coordinate repair priorities and the turn in of repaired end items or components to supply units.

c. Direct exchange (DX) is the receiving of a serviceable item in return for an unserviceable item on a one-for-one basis. The unserviceable reparable item is repaired (if determined to be repairable and not excess) at the lowest appropriate maintenance level and is returned to stock. There are three specific direct exchange loops; the user-direct support loop provides for the exchange of items repaired at the DS level for replacement to the user; the direct support-general support direct exchange loop provides for the exchange of items that are repaired at the general support maintenance level for replacement to the direct support level; and the general support-depot direct exchange of selected items repaired at depot maintenance activities for replacement to the general support level (fig 9-14).

d. The issuance of equipment with the highest remaining service life to frontline units reduces requirements for maintenance in forward areas. If the situation permits, one method of reducing requirements for repair parts in forward areas is to locate older items of equipment in areas where higher categories of maintenance are more readily available.

e. Maintenance inspections determine the degree of serviceability and extent of repairs necessary. Except for DX items, when DS maintenance activities cannot repair an item within established time limits and cannot replace an unserviceable reparable item from the operational readiness float, the using unit turns in the item and requisitions a replacement through supply channels (FM 29-10, FM 29-20, FM 29-23).

f. Supporting maintenance units perform the maintenance function of supported units when required by practical considerations and directed by the commander having jurisdiction over both the supported and supporting units. In the case of DS this procedure should be used with caution, because the performance of organizational maintenance by DS personnel results in degradation of the DS capability.

g. Evidence of abuse or of failure to perform assigned maintenance functions is reported to the proper commander for corrective action.

h. To the extent possible, a technical inspection is made of each piece of equipment, component, or assembly requiring repair to determine the extent of repair necessary before beginning any repair or replacement of parts, components, or assemblies.

i. Controlled cannibalization is a source of supply for parts, components, and assemblies not immediately available from the supply system or for discontinued items for which no other source of supply exists (AR 750-1).

j. The Department of the Army establishes criteria and standards prescribing economical repair and overhaul limits for items of equipment. Deviations are a matter of policy to be determined between the DA and major Army commanders.

k. Excess equipment, and serviceable, unserviceable repairable, and unserviceable not repairable equipment is reported, disposed of, or shipped to designated maintenance or supply installations in accordance with instructions issued by the MMC.

l. Calibration and certification of test, measurement, and diagnostic equipment are functions of maintenacne.

Section III. RESPONSIBILITIES

10-5. General

a. Individual Responsibilities.

(1) Individuals are responsible for equipment issued for their own use which is normally under their personal care or of which they are the assigned operators.

(2) Operators or users of equipment are responsible for proper preventive maintenance of assigned equipment before, during, and after actual operations.

b. Command Responsibilities. Commanders are responsible for—

(1) Insuring that equipment issued to their units or organizations is in a serviceable and combat-ready condition and that it is properly used, maintained, and accounted for. In this regard, corps and theater army commanders, are responsible for developing and maintaining a self-sufficient military capability and capacity for the direct support and general support maintenance of the combat, combat

support, and combat service support elements of their commands. (AR 750-1).

(2) Advising higher commanders of their equipment replacement and maintenance support requirements.

(3) Complying with instructions and procedures for preventive maintenance operations, training their commands in preventive maintenance of equipment, and allocating sufficient time for per forming preventive maintenance. Training in preventive maintenance is equal in importance to other military training.

(4) Assigning maintenance responsibilities for each item of organizational equipment to specific individuals.

(5) Preventing abuse of materiel under their control; investigating evidence of abuse and taking corrective action.

(6) Maintaining records on the usage, maintenance, and modification of certain items of equipment as prescribed in applicable regulations and directives.

(7) Insuring prompt evacuation of unserviceable equipment from using and maintenance units or activities to a maintenance activity that has the capability to restore equipment to a serviceable condition, or sending units forward to repair equipment in place when more appropriate.

(8) Designating an individual or staff element of the command as the unit logistics readiness officer. This officer has responsibility for coordination and supervision of materiel readiness functions of the command.

c. Staff Officer Responsibilities. Staff officers provide the commander advice and assistance in all phases of maintenance in their respective fields of interest. See FM 101-5 for specific responsibilities of staff officers.

10-6. Commanders' Responsibilities

a. Theater Army Commander. The theater army commander—

(1) Determines maintenance support requirements.

(2) Formulates plans and policies for provisions of maintenance support.

(3) Provides staff supervision over execution and implementation of maintenance plans and policies.

(4) Allocates maintenance units to major subordinate commands based on requirements, priorities, and availability of maintenance units.

b. Theater Army Area Command Commander. The TAACOM commander—

(1) Implements theater army plans and policies for providing—

(*a*) The DS and GS maintenance for units in and passing through the COMMZ and any allied forces as directed.

(*b*) Backup GS maintenance support to corps maintenance units when directed by TA commander.

(*c*) Evacuation to CONUS of unserviceable, economically reparable items requiring depot maintenance, in accordance with Department of the Army policies.

(2) Provides staff supervision over maintenance activities.

(3) Assists theater army in determining maintenance support requirements.

c. Corps Commander. The corps commander—

(1) Is responsible for maintenance of items issued to corps units.

(2) Provides staff supervision over execution and implementation of maintenance plans and policies.

d. Corps Support Command Commander. The COSCOM commander implements plans and policies for providing—

(1) The DS maintenance for all nondivisional units assigned to or located in the corps area. (Maintenance units organic to divisions and separate brigades accomplish DS maintenance, provide technical assistance, and furnish repair parts to divisional and separate brigade units.)

(2) The GS maintenance for items evacuated by divisional and nondivisional DS maintenance units and installations located in the corps area. GS maintenance will be in support of the overall DS mission and oriented toward the repair and return to stock of components and assemblies. DX items will be repaired and returned to the GS direct exchange activity. Items evactuated beyond the capacity of DS units are considered overflow. These will be repaired at the GS level and returned to the using unit through DS maintenance channels.

(3) Stall supervision over maintenance activities.

(4) Technical assistance to units located in the corps area.

(5) Determination of the adequacy of maintenance support in the corps area to include current and future operations.

(6) Advice to the corps commander and TA of corps requirements for maintenance support for current and future operations.

(7) Acquisition, storage, and issue of maintenance supplies required for the COSCOM mission.

Section IV. MAINTENANCE CATEGORIES

10-7. Categories

Generally there are four categories of maintenance operations—organizational, direct support, general support, and depot. These are described in AR 750-1 and discussed in *a, b,* and *c* below. The exception to this categorization in Army aircraft maintenance which is discussed in section V. The purpose of categorization is to relate maintenance to other military operations, provide organization to the system of maintenance in the field, facilitate assignment of maintenance responsibilities to specific levels of command, and permit orderly and efficient distribution of maintenance assets. The mission of a particular unit or organization, the complexity and bulkiness of the items of equipment, the operational location of the unit, and requirements for constant readiness dictate the category of repairs authorized the unit or organization. Maintenance allocation charts for equipment assign functions and repair operations to the lowest appropriate category.

a. Organizational Maintenance. Each combat, combat support, and combat service support unit, organization, or activity is authorized an organic materiel maintenance element (i.e., operator/crew and/or maintenance personnel) to perform authorized organizational maintenance operations on equipment assigned to or used by it to accomplish its mission. For some equipment, e.g., medical materiel, all authorized maintenance operations are allocated to the organizational maintenance category wherever practicable. Also, certain units, organizations, activities, because of the design characteristics or limited distribution of their principal items of equipment or operational requirements, are authorized an organic capability to perform maintenance operations normally allocated to the direct support maintenance category (FM 29-2).

b. Direct and General Support Maintenance.

(1) Combat service support units are authorized in the Army force structure to provide direct support and general support maintenance service to Army forces. To the maximum extent practicable, these units are functionalized, i.e., organized to perform specialized maintenance tasks on equipment of several commodity groupings.

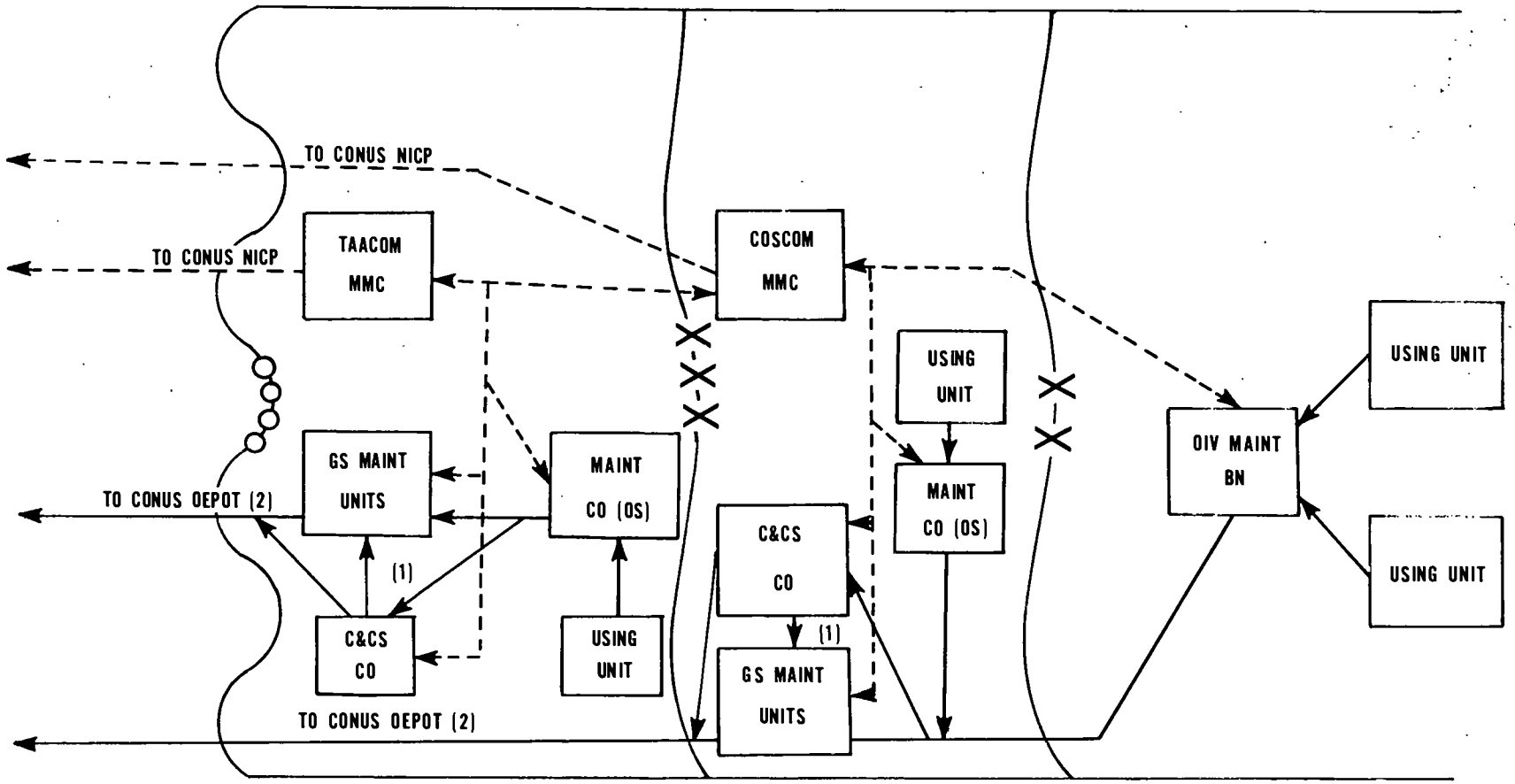
(2) Within each major level of command, support maintenance units are normally assigned to a support element whose commander has been assigned responsibility for the operation of the logistical support suructure of the command. Materiel management centers, supported by ADPE and established within the appropriate staff section of these elements or designated as the supporting MMC, assist these commanders in the management of their support maintenance operation.

(3) Direct support maintenance operations are performed on equipment in the direct support unit are or, whenever it is practical and cost effective, at the site of operation or failure. This category of maintenance is limited to the repair of end items or unserviceable assemblies in support of using organizations. Extensive use is made of highly mobile contact teams from the support maintenance units in this effort. "One stop" service, to the extent practicable, is the goal of direct support maintenance. In furtherance of this goal, DS maintenance units serve as the supply system outlet for repair parts required by the using units to perform authorized organizational maintenance tasks. They also maintain operational readiness float stocks to assist in maintaining the requisite degree of materiel readiness in supported units, and serve as primary reentry points for unserviceable reparable equipment to the theater supply system. Unserviceable reparable items will not usually be held at DS maintenance unit locations it they are not to be repaired and returned to the user, DX, or float stock at that level. Evacuation or disposition instructions for items which are not reparable at DS level (fig 10-1) are normally provided by the appropriate materiel management center.

(4) General support maintenance operations are primarily aimed at the repair of unserviceable economically repairable items of equipment for return to supply storage units or support of the DX system. For the most part, the workload of GS maintenance units consists of items evacuated by DS maintenance units; however, work is also received from collecting points operated by collection and classification service companies. Also, GS units may be required to perform GS-level maintenance on items stocked by supply units. Further GS maintenance units may be requested to provide GS-level maintenance directly to operating units by the use of mobile teams. For example, repair of certain items of fixed or emplaced equipment allocated to the GS level of maintenance can be performed more speedily and with less effort on-site than if the items were removed from service and evacuated to the GS level. Items repaired by GS maintenance units may consist of complete end items which are repaired on a "jobshop" basis; however, most of the GS unit worklosd will consist of unserviceable repairable modules (components, assemblies, subassemblies

and parts). Some of these unserviceable modules are repaired as they are received; however, for maximum efficiency and production, such unserviceable reparable assets may be accumulated pending a repair program scheduled by materiel managers at the appropriate level.

(5) Guidance for support operations required in backup support relationships is contained in FM 29-23 and FM 29-30. Particular reference is made to authorized integral maintenance capability above organizational level.



FLOW OF MATERIEL

FLOW OF INFORMATION AND INSTRUCTIONS

1 FLOW OF REPAIRABLE MATERIEL FROM C&CS CO TO MAINTENANCE UNITS

2 ITEMS REQUIRING DEPOT MAINTENANCE ARE EVACUATED TO CONUS.

NOTE: BACKUP SUPPORT TO THE COSCOM BY THE TAACOM IS PERFORMED WHEN SPECIFICALLY DIRECTED BY TA.

Figure 10-1. Evacuation flow of unserviceable class II, VII, and IX items supported by functional direct and general support maintenance battalions (schematic).

c. Depot maintenance. Normally, depot maintenance is performed only by AMC depots in CONUS rather than in the theater. Such operations support the overall DA inventory management program. They are used as an alternative or supplement to new procurement as a source of serviceable assets to meet DA materiel requirements. Programs for the depot maintenance of materiel—except those for the repair and return to Reserve component users of equipment—are approved by HQ, DA and controlled by national level materiel managers under the monitorship of the Deputy Chief of Staff for Logistics (DCSLOG), DA. The Reserve components repair and return-to user depot maintenance program is controlled by Forces Command (FORSCOM) and coordinated with DCSLOG, DA. Approved depot maintenance programs are executed by designated Army arsenals and depot maintenance facilities; by agreement with other military services; and by contractual arrangement with commercial firms. Such repair programs are planned and scheduled based on the needs of the supply system and the DX program, and in accordance with the availability of the requisite repair parts and other maintenance resources. Oversea theater commanders with specifically DA approved depot maintenance missions participate in formulating depot maintenance programs for the execution of which they will be assigned responsibility.

10-8. Repair Parts Supply

See also para 9-34.

a. Those combat support units that have a DS maintenance capability for certain items of equipment that are essential to the continuity of their missions (e.g., certain signal units, engineer units, and aviation units), will receive, through DS maintenance units, the repair parts and other items of supply used in performing DS maintenance on such items.

b. When authorized, maintenance support organizations may use controlled cannibalization as a source of supply for repair parts in accordance with the provisions of paragraphs 4-33 through 4-45 of AR 750-1. Within the criteria established by this regulation, cannibalization at the direct support maintenance level is normally limited to—

(1) The exchange of serviceable/unserviceable modules or parts between like items of unserviceable economically repairable equipment.

(2) The exchange of serviceable/unserviceable modules or parts between as unserviceable economically repairable item of equipment and a like item of unserviceable uneconomically repairable equipment.

(3) The exchange of unserviceable uneconomically repairable modules and parts from the assets of the direct exchange program for like items of serviceable or unserviceable economically repairable modules or parts from unserviceable uneconomically repairable end items. Controlled cannibalization does not include—

(*a*) The recovery of secondary items from unserviceable, uneconomically repairable principal items for return, or reclamation and return, to National Inventory Control Point (NICP) accountability.

(*b*) The removal of modules and parts from unserviceable equipment undergoing depot or assembly line-type maintenance operations and their reclamation and reuse in or in support of these operations.

c. DS maintenance units store minimum levels of supplies, based on appropriate selective stockage criteria, operational requirements, available transportation, and enemy capabilities. The primary sources of repair parts provided by DS maintenance units are through the direct exchange program (fig 9-14) and through the use of the Quick Supply Store (QSS) concept, when operationally feasible, to provide low dollar value, fast moving repair parts and maintenance related supplies to support using unit needs. (See AS 710-2 for QSS details). DS maintenance units, in turn, will rely on those procedures ourlined in paragraph 9-34 to obtain slower moving, low demand items. The CONUS supply system will be responsible for the stockage of slow moving, low demand items to support the theater's requirements (thereby reducing or eliminating stockage of these items in the theater) and for replenishing direct support and general support levels of repair parts stockages.

d. Appropriate maintenance units store and issue repair parts, components, and assemblies that are in recurring or anticipated demand and that meet one or more of the following criteria:

(1) Repair parts for special purpose equipment for which specific maintenance organizations have maintenance responsibility.

(2) Mechanical, electrical, or electronic equipment requiring relatively complicated maintenance in storage, in transit, or at time of issue.

(3) Critical items of equipment that require decision on whether repair, replacement, or salvage is the most practicable course of action. The basis for this decision is knowledge of maintenance workload and availability of repair parts and replacement items.

e. Maintenance units that provide repair parts support as part of their direct support mission rely

on mechanized repair parts management systems to accomplish this mission. Direct support maintenance is the first level which applies the mechanized repair parts management system to manage and obtain repair parts necessary to support both their DS maintenance mission and to support customer repair parts requirements.

f. Three significant features of the Army field stock control system govern supply operations in maintenance organizations. These features are selective stockage, stock accounting records, and demand data (AR 710-2).

Section V. MAINTENANCE CONCEPT FOR ARMY AIRCRAFT

10-9. General.

The objective of Army aircraft maintenance is to maintain maximum operational readiness of Army aircraft as a weapons system through the accomplishment of maintenance where it can be most effectively and economically performed. In furtherance of this objective three levels of aircraft maintenance are recognized: Aviation Unit Maintenance (AVUM), Aviation Intermediate Maintenance (AVIM) and Depot Maintenance.

10-10. Aviation Unit Maintenance (AVUM)

AVUM activities will be staffed and equipped to perform high frequency "on-aircraft" maintenance required to retain or return aircraft to a serviceable condition. The maintenance capability of the AVUM will be governed by the maintenance allocation chart (MAC) and limited by the amount and complexity of ground support equipment, facilities required, and number of spaces and critical skills available. The range and quantity of authorized spare modules/components will be consistent with the mobility requirements dictated by the air mobility concept. (Assignment of maintenance tasks to divisional company size aviation units will consider the overall maintenance capability of the division, the requirement to conserve personnel and equipment resources, and air mobility requirements.)

a. Company size aviation units perform those tasks which consist primarily of preventive maintenance and maintenance repair and replacement functions associated with sustaining a high level of aircraft operational readiness. They perform maintenance inspections and servicing to include preflight, daily, intermediate, periodic, and special inspections as authorized by the MAC or higher headquarters. They identify the cause of equipment-system malfunctions using applicable technical manual troubleshooting instructions, built-in-test equipment, installed aircraft instruments, or easy-to-use/interpret diagnostic/fault isolation devices (TMDE). They replace worn or damaged modules/components which do not require complex adjustments or system alignment and which can be removed/installed with available skills, tools, and equipment. They perform operational and continuity checks and make minor repairs to the electrical system; inspect, service, and make operational, capacity and pressure checks to hydraulic systems; and perform servicing, functional adjustments, and minor repair/replacement to the flight control, propulsion, power train and fuel systems. They accomplish air frame repair which does not require extensive disassembly, jigging or alignment. The manufacture of air frame parts will be limited to those items which can be fabricated with tool and shop stes. The company size units evacuate unserviceable modules/components and end items beyond the repair capability of AVUM to the supporting AVIM.

b. Less than company size aviation units such as aviation elements organic to brigade, group, battalion headquarters and detachment size units are normally small and have less than ten aircraft assigned. Maintenance tasks performed by these units will be those which can be accomplished by the aircraft crew chief or assigned aircraft repairman and will normally be limited to preventive maintenance, inspections, servicing, spot painting, stop drilling, application of non-stress patches, minor adjustments, module/component fault diagnosis, and replacement of selected modules/components. Repair functions will normally be accomplished by the supporting AVIM.

10-11. Aviation Intermediate Support Maintenance (AVIM)

AVIM provides mobile, responsive "one stop" maintenance support. (Maintenance functions which are not conducive to sustaining air mobility will be assigned to depot maintenance.) AVIM includes all maintenance functions authorized to be done at AVUM. Repair of equipmant for return to user will emphasize support of operational readiness requirements. Authorized maintenance includes replacement and repair of modules/components and end items which can be accomplished efficiently with available skills, tools, and equipment. The AVIM

unit establishes the direct exchange program for AVUM units by repairing selected items for return to stock when such repairs cannot be accomplished at the AVUM level; and inspects, troubleshoots, tests, diagnoses, repairs, adjusts, calibrates, and aligns aircraft system modules/components. AVIM units will have the capability to determine the serviceability of specified modules/components removed prior to the expiration of the time between overhaul (TBO) or finite life. Module/component disassembly and repair will normally support the DX program and be limited to tasks requiring cleaning and the replacement of seals, fittings, and items of common hardware. Air frame repair and fabrication of parts will be limited to those maintenance tasks which can be performed with available tools and test equipment. Unserviceable reparable modules/components and end items which are beyond the capability of AVIM to repair will be evacuated to depot maintenance. The AVIM unit will perform aircraft weight and balance inspections and other special inspections which exceed AVUM capability; provide quick response maintenance support, including aircraft recovery and air evacuation, on-the-job training, and technical assistance through the use of mobile maintenance contact teams; maintain authorized operational readiness float aircraft; provide collection and classification services for serviceable/unserviceable materiel, and operate a cannibalization activity in accordance with AR 710-2 (The aircraft maintenance company within the maintenance battalion of a division will perform AVIM functions consistent with air mobility requirements and conservation of personnel and equipment resources. Additional intermediate maintenance support will be provided by the supporting nondivisional AVIM unit.)

10-12. Depot Maintenance

Performed in CONUS, depot maintenance of aircraft and aircraft modules/components will be managed by the NICP in coordination with USAMIDA and USAMC. This level of maintenance will be accomplished in organic facilities, by contract with commercial firms or through interservice agreements with other military services. Depot maintenance capability will include overhaul, conversion, major repair, modification, manufacture of items not supported by the supply system, complete painting of aircraft and performance of analytical, special and non-destructive testing/inspection in support of NMP requirements for all aircraft and aircraft modules/components.

Section VI. MISSILE SYSTEM MATERIEL

10-13. General

a. The technical design and tactical employment concept of each system determine logistic support concepts for surface-to-air defense and surface-to-surface missile systems. This section states the general principles of missile maintenance and supply, recognizing the requirement for significant deviations from conventional logistic support concepts. Detailed missile support coverage is contained in FM 9-59, FM 29-23, and FM 29-24.

b. The critical requirement for immediate reaction by artillery missile units necessitates the development of logistic support procedures that are immediately responsive to artillery commanders.

c. Equipment interrelationships, multiple functions and system tuning requirements necessitate that today's user technicians be trained to a high degree of competence on the entire weapons system.

d. Material in this section is applicable to missile system materiel, both surface-to-air defense and surface-to-surface missile, and corresponding ground support equipment. Policies relating to air defense artillery and field artillery missiles are not always compatible because of differences in missions; this section points out qualifications wherever these differences exist.

e. Bases for the determination maintenance concepts and functions for each missile and fire distribution system are: concept of tactical employment of the system in the field; threat; the inherent characteristics of electronic equipment; overall manpower requirements; comparison of dollar cost of components, assemblies, and repair parts; and an analysis of operational availability versus support efficiency.

10-14. Missile Maintenance Criteria

Consideration of the following criteria is essential in determining maintenance functions to be performed by the user:

a. Availability of trained personnel in the using unit to perform required checks and adjustments, to analyze malfunctions, and to locate and correct troubles.

b. Accomplishment of repair or replacement as close to the origin of failure as possible.

c. The maintenance design philosophy on which the missile system is designed (component,

subassembly, assembly, or section replacement). Test equipment and repair parts must be consistent with this design philosophy. Maximum utilization should be made of the users' talents and skills to effect repair through the use of low cost piece parts and not through the replacement of high cost chassis and assemblies.

d. US Army air defense missile units are deployed throughout many parts of the world. These units are operating under a combat environment even though missiles are not being fired and no battle damage is being experienced. There is an overriding need to maintain air defense missile systems at peak operational readiness and the potential disasterous consequences of even moments of equipment down time dictate that the artillery commander have complete freedom in performing maintenance and upkeep of his missile system to the maximum extent possible. Once a malfunction occurs, the primary concern is to return the system to operational status as soon as possible. When the system is back in operation those malfunctioning assemblies or chassis can be repaired at the point of failure by the system technician or returned to the DS, GS, or CONUS depots for rebuild.

10-15. Categories of Missile Maintenance

a. Direct support maintenance may be organic to the missile-firing unit or provided by missile support elements furnishing support on an area basis.

b. The operational requirements and sophisticated equipment of certain missile systems dictate that maintenance functions required to maintain systems at peak operational readiness be performed at the operational site. This maintenance capability must include the skills, tools, test equipment, and repair parts required to accomplish immediate on-site repairs of the missiles and their associated firing and control equipment. Such a capability can be realized by providing for an organic DS element or by proper alignment of maintenance functions in maintenance allocation charts.

c. Normally, general support maintenance is provided by a guided missile maintenance company/detachment, GS, augmented with additional capability if necessary.

d. Appendix B, AR 750-1 provides greater detail on maintenance concepts for electronic equipment including missile systems.

10-16. Responsibility

Missile-firing unit commanders are responsible for maintenance of their missile systems. They execute this responsibility through efficient utilization of an organic maintenance capability and by placing support requirements beyond organic capability on designated support units.

Section VII. INSPECTIONS, STAFF VISITS, AND ASSISTANCE

10-17. Inspections

a. General.

(1) Inspections are the means by which commanders ascertain serviceability of equipment and promote efficient maintenance.

(2) All inspections of equipment and maintenance operations are under command authority.

(3) Supply and maintenance personnel of supporting units and activities assist commanders in performing inspections to ascertain adequacy and effectiveness of organizational maintenance.

b. Reports. The inspecting agency prepares inspection reports and the commander initiates corrective action when necessary.

10-18. Staff Visits

Maintenance staff visits under command authority determine whether maintenance doctrine, policies, procedures, and instructions are adequate. These staff visits also determine adequacy of the following:

a. Training of personnel in the operation, use, and maintenance of equipment.

b. Tools and test equipment.

c. Maintenance support.

10-19. Maintenance Assistance and Instruction Team (MAIT) Program

The purpose of the MAIT program is to augment the commanders' assistance and instruction to organic, attached, and supported units. This program provides a means whereby technical expertise can be furnished individual unit commanders to help them identify and solve problems which are contributing to the inability of their units to meet readiness standards. Assistance and instruction will emphasize practical application of maintenance techniques and procedures for the individual soldier. Visits to units are programed and planned annually for all supported units; however, accomplishment is not mandatory, as requested or directed visits take precedence.

Section VIII. MAINTENANCE SUPPORT OF STABILITY OPERATIONS

10-20. General

The administration of large-scale maintenance programs in support of stability operations is complex. In addition to maintaining US Army equipment, it may be necessary to support the host country's maintenance system, which may include foreign and obsolete equipment. Decentralized operations and limitations on movement imposed by the security situation create additional problems. It is desirable that maintenance shops be permanent structures, properly equipped, and staffed with qualified repairmen. Proper scheduling insures that needed items are repaired in an order of priority. Preventive maintenance is essential and depends on a comprehensive schedule of inspections (including technical and spot-check inspections by maintenance organizations, inspections by commanders, and supplemental inspections of host country maintenance by US Army advisers) and on a system of immediate repair or replacement.

10-21. Maintenance Problems

a. In stability operations, large-scale diversion of military repair parts and supplies to the civilian economy through pilferage may become a difficult problem. The host country may lack adequate accounting controls or employ deficient control procedures at railheads and equipment collecting points.

b. Maintenance failures are often attributable to lack of command emphasis on adherence to prescribed procedures. Implementation of corrective action and maintenance inspections to check the progress of corrective action will contribute to successful maintenance procedures.

10-22. Preventive Maintenance

The nature of stability operations precludes elaborate maintenance support; therefore, there is need for a high level of preventive maintenance and responsive backup support. Preventive maintenance is vital in areas where adverse weather and terrain conditions necessitate more than normal maintenance and where supported indigenous forces are not fully familiar with the importance of maintenance.

10-23. Contact Maintenance

Direct support repair teams may accompany combat and combat support units to provide on-the-spot minor repairs and limited direct exchange. Mobile maintenance teams from combat service support units should be available to using units to assist in preparation for operations and in rapid recovery from completed operations. When such maintenance services cannot accompany combat and combat support units, there must be provision for direct exchange of unserviceable items (such as weapons and radios) in selected stockage, positioned at security posts and combat bases.

a. Time should be available before and after each mission to perform repairs and obtain replacement items.

b. The DS elements must provide rapid maintenance support at each static security post and combat base. Although primary emphasis is on repair by replacement (direct exchange), efforts will be made to repair items, short of performing complete overhaul or rebuild. Planning will insure that only fast-moving, high-mortality, combat essential items are included in the stockage of float items.

c. It will be necessary to evacuate or otherwise dispose of items that cannot be practically repaired at the DS level.

Section IX. EVOLVING MAINTENANCE CONCEPTS

10-24. Combat (Systems) Oriented General Support System

a. The Army logistics system normally is organized to support forecasted requirements that are based primarily on historical experience. However, combat operations often produce unforeseen circumstances which may place unexpected demands on supporting systems. In order to improve the responsiveness of the logistic support system and to minimize the impact of such unforeseen circumstances, a combat (systems) oriented general support (COGS) system for materiel is being developed which combines general support maintenance and class VII, IX, and DX supply.

b. The basic operating units of the COGS system are general support centers which provide integrated materiel support. Six probable types have been identified.

(1) Armament and combat vehicle (vehicles and heavy weapons).

(2) Wheeled vehicle (tactical wheeled vehicles, trailers, and wheeled vehicle prime movers).

(3) Communications and electronics.

(4) Ground support (small arms; environmental

and temperature control equipment; reproduction, decontamination, laundry, and fuel dispensing equipment; office machines; power generation, materials handling, and construction equipment; etc).

(5) Missiles and munitions.

(6) Aviation.

c. By utilizing COGS principles, flexible support centers can be tailored on a single or multiple commodity basis to satisfy mission and workload requirements. Each center would have intergrated supply and maintenance support responsibility for a group of commodity materiel items or designated weapons systems. Each center, in its commodity area, would provide for—

(1) GS maintenance to include equipment recovery, evacuation, classification, and cannibilization services.

(2) GS supply to include class VII with the capability for processing equipment for issue and combat loading of combat vehicles as applicable, class IX (ASL) and direct exchange services. Maximum use of containers is emphasized.

(3) Maintenance of approved operational readiness float items.

(4) Technical assistance to supported units (user and DS) to include the forward deployment of battle damage assessment teams. Battle damage assessment requires the highest type of skills and experience. The major source of skills and experience should be the COGS centers.

(5) Contact parties to supplement the skills and capabilities of users, supporting DS, and other GS units to preclude the evacuation or cross handling of materiel and to enhance combat readiness.

(6) A point of interface for on-site technical expertise in the technical or commodity chain between forward echelons, major commands (COSCOM and TAACOM), and DARCOM commodity commands. In coordination with the MMC, they decide what work should be accomplished and at what location. Their staffing should include appropriate commodity technical representatives.

d. Although the basic units of the COGS system are the centers discussed above, the support system may be tailored for a specific situation. For example, two or more centers may be consolidated or, on the other hand, optimum weapon systems support may be achieved by having more than one center of a particular type. Also, general support repair parts (except for missile and aircraft) that are common to several commodities may be consolidated at one of the centers or perhaps at some other more centralized location. The structure of the support system is not fixed. The objective of the COGS system is to provide a flexible general support structure which ensures optimum support of the most critical weapon systems.

e. While COGS centers would provide integrated supply and maintenance support, they must operate within the framework of current guidance for integrated material management. For example, the COSCOM MMC provides the principal source of commodity managers at the corps level. They must address the problem of how to manage work priorities at the GS level and how to deploy the total DS/GS resources to most effectively accomplish the material support mission. Therefore, divisional and nondivisional DS units place their requirements on their associated MMC who then provides materiel management instructions and directives to COGS centers for the execution of command-approved supply and maintenance priorities, programs, and operations.

10-25. Modular Oriented Direct Support (MODS) Maintenance

Present doctrine provides a one-stop DS capability to the user. However, the present structure of nondivisional DS maintenance units is rigid and requires a major realignment by MTOE to accomplish the work load imposed by changing materiel densities. In order to provide the required flexibility it has been suggested that modular designed cells be developed for DS units which will provide more responsive maintenance and supply support. While current DS doctrine and unit structuring will be continued, this general concept which is not approved Army doctrine, will be the subject of more detailed and analytical investigation.

CHAPTER 11

LOGISTICS-TRANSPORTATION

(SOLOG 27)

Section I. GENERAL

11-1. Introduction

a. The scope of transportation encompasses movement of personnel and materiel, and the equipment, facilities, staff planning, procurement actions, and management practices necessary to accomplish such movement.

b. The commander of a unified or a specified command coordinates the air, sea, and land transportation means assigned to his command. He assigns responsibilities for the operation of air and water terminals in a theater of operations.

c. Control and allocation of transportation in the theater is under the staff supervision of the theater logistics directorate (J4). When required, the theater commander convenes the joint transportation board (JTB), to recommend allocation of theater transportation capabilities. The JTB reports to the J4 and has representation from the theater joint staff, each of the military service components, major joint forces in the theater and, when appropriate, from host and Allied nations. The chairman of this board is a member of the theater staff, normally the J4.

d. Theater army normally provides surface transportation support to US forces and as required to host nation or allied forces in the theater. Joint agreements and directives of the theater commander specify details of such responsibilities. The theater army commander normally assigns responsibility and resources for surface transportation support to the TRANSCOM and corps commanders.

e. The extensive requirements for military transportation in the theater of operations have a heavy impact on the civilian economy and population in the area. Transportation planners must coordinate with host and Allied nation transportation authorities, and with the ACofS, civil-military operations, to insure minimum interference between military and civilian transportation. While civilian transportation assets are used to assist the military transportation effort, when appropriate, planners should provide an adequate transportation capability to meet essential civilian needs when host nation facilities are inadequate.

11-2. Transportation Service

a. Transportation staff specialists are authorized in the staff sections of the TRANSCOM and COSCOM headquarters. They are also integrated into the staff elements in corps headquarters and in the theater army area commands and area support groups. In the divisions the transportation officer is on the special staff of the division headquarters. These staff officers are responsible for technical supervision of the transportation service required by the command. The TRANSCOM provides transportation services (less inter-theater and intra-theater airlift and sealift) to the entire theater. These services are intersectional in nature extending through the COMMZ and into the combat zone. Transportation support to the corps is provided primarily by units of the transportation organization assigned to the COSCOM. The size of the transportation organization may fluctuate as the size of the corps changes but will normally be a group or brigade.

b. Transportation capability available to the theater army commander may include Army elements and elements of other military services and agencies.

(1) *Army elements.*

(*a*) Transportation units.

(*b*) Army aviation units.

(*c*) Units possessing their own organic transportation.

(2) *Other military services and agencies (support).*

(*a*) Navy intratheater ocean and coastal shipping.

(*b*) Ocean shipping operated or controlled by the Military Sealift Command (MSC).

(*c*) Intertheater and intratheater air transportation operated or controlled by the Military Airlift Command (MAC).

(*d*) Local civilian transportation services and facilities.

11-3. Basic Principles

a. Organization of transportation support provides for management and coordination of various modes of transportation (except pipelines) and integration of available civilian transportation capabilities into movement plans and programs. Integration of all modes of transportation into one system accomplishes the movement mission.

b. Transportation support serves the theater as a whole and must have a high degree of flexibility to permit necessary diversion, concentration, and allocation of transportation. Flexibility is of particular importance in nuclear operations. The transportation system is centralized in direction and decentralized in execution to attain the desired degree of integration and flexibility.

c. Organization of transportation support must take full advantage of all available transportation modes and resources.

d. Transportation for the evacuation of patients is a responsibility of the Army Medical Department. The Army Medical Department controls all field, bus, rail, and air ambulance transportation resources for the evacuation of patients within a theater of operations. When additional transportation means for the evacuation of patients is required, the Army Medical Department is dependent upon the Air Force, the Navy, and/or the Army command controlling other forms of transportation. The medical command commander will continuously forecast the land, rail, air, and water transportation requirements for patient evacuation.

Section II. MOVEMENTS MANAGEMENT

11-4. General

Movements management, a function of the staff transportation/movements officer, provides for the best use of transportation resources in the movement of supplies and personnel. Movements management involves two major functions—transportation movements and highway regulation.

11-5. Transportation Movements

Transportation movements are concerned with planning, coordinating, programing, and supervising the allocation and use of the available transportation resources to meet the movement requirements of the command. To accomplish this, movement control centers (MCC) are established at TA and COSCOM headquarters, and transportation movement offices are established at storage locations, terminals, and other critical points in the transportation system throughout the theater as required.

11-6. Highway Regulation

Highway regulation is concerned with planning, scheduling, routing, and directing the use of the highway net available to the command to realize the net's maximum potential. This regulation is accomplished by establishing a highway traffic headquarters that plans and coordinates for the major commands having area jurisdiction; by establishing highway regulation points; and in coordination with the military police, establishing traffic control posts to provide information to the highway traffic headquarters and to supervise the implementation of its plans.

11-7. Control of Movements

The commander charged with providing combat service support exercises centralized control of movements. The echelon of command that has knowledge of the total requirement and the total capability can best correlate movement requirements and capabilities.

a. The TA MCC serves theater army, and as required, other US forces and host nation or Allied forces. As the central movements management agency, it prepares movement and port clearance plans and programs, conducts necessary liaison with higher and lower movement control echelons, supervises the activities of the field transportation movement offices, and insures proper use of available movement capabilities.

b. The COSCOM MCC, and its subordinate transportation movement offices accomplish movement management in the corps (except for the movement of bulk class III in pipelines). The MCC accomplishes movement planning, prepares and supervises the execution of COSCOM movement programs, maintains an in-transit status of shipments, and maintains liaison with transportation movement agencies of the TA, host nation, and other commands as required.

c. Details concerning transportation movements and individual responsibilities are provided in FM 55-1, FM 55-10, FM 55-11, and FM 101-5.

d. The Army Medical Department is responsible for providing transportation for the evacuation of patients. Additional transportation requirements for patient evacuation will be submitted by the medical command medical regulating office (MRO) to the movements control center (MCC) (e.g., request for locomotive power to move an ambulance train (rail)). For a detailed discussion on patient evacuation, see FM 8-10.

Section III. TERMINALS

11-8. General

a. Terminal operations comprise those functions for loading, unloading, and in-transit handling of personnel and cargo at or between origin and destination when transfer is necessary from one transportation mode or unit to another. Generally, classification of terminals is by principal transportation mode (railways, highways, inland waterways, oceans, and airways). Any terminal, regardless of classification or allocation, may perform embarkation or debarkation functions, or both.

b. Operation and/or supervision of terminal installations (except Air Force air terminals and bulk petroleum facilities) and transfer points is a responsibility of the transportation command. At large complex terminal installations, there may be a requirement for assignment of detachments or units from other military services. These units assist Army transportation agencies by providing technical advice pertaining to identification of items, special handling of certain items, and other matters of a technical nature.

c. For details on terminal operations, see FM 55-60.

11-9. Water Terminals

a. Water terminals include ports, harbors, beaches, and other portions of the coastline; and navigable inland waterways used for, or reserved for the loading or discharge of troops and cargo. Water terminals normally are the means of entry into a theater of operations for the bulk of materiel and units shipped to the theater. One transportation terminal group can supervise the operation of a number of water terminals spread over a large coastal area. A large military terminal is normally under the command or supervision of a transportation terminal battalion. In commercial terminals military cargo may be handled by terminal service companies or detachments using local contractor/host nation facilities and labor. Construction of water terminal facilities is an engineer service responsibility.

b. Construction of temporary facilities supplements or replaces permanent water terminals and achieves dispersion.

c. Control of ship arrivals at water terminals reduces concentration and possible loss. Discharge and loading of ships should take place at dispersed points within terminal areas. Rapid terminal clearance is essential. Only those in-transit storage areas and other facilities essential to terminal operations should be in the terminal areas.

d. The following factors determine the number of terminals, the number of ships that should be berthed simultaneously at each terminal, and the distances that should be maintained between terminals to provide suitable dispersion:

(1) Friendly tactical and logistic situation.

(2) Total terminal throughput capacity required.

(3) Enemy capabilities.

(4) The number, capacities, and proximity of ports, beaches, and other areas suitable for discharge of ships.

(5) Personnel and equipment available for establishing and operating terminals, including indigenous resources.

(6) Availability and proximity of highway or rail facilities for ease in terminal clearance.

e. It may be necessary to use only a portion of the capacity of established major terminals that afford protected anchorages and well-developed inland transportation systems. A few major terminals may provide sufficient total capacity, but the resulting concentration of shipping activity would present lucrative targets. For this reason, routing of the shipping load is not only through major water terminals but also, whenever feasible, through smaller terminals and unloading points (beaches and inland ports). It is desirable that some of the terminals possess a capacity in excess of their planned use so that shipping can be quickly diverted in case of loss of terminal capacity elsewhere. Increasing the number of terminals increases the requirement for personnel and equipment to construct, maintain, and operate terminal and beach facilities; to provide additional communications; and to construct and maintain additional road and rail facilities.

f. To speed and simplify handling, cargo is shipped overseas in unitized containers or pallets to the extent practicable. (The terminals must have suitable materials handling equipment to handle unitized cargo).

g. Landing of personnel and cargo will be on beaches when port facilities are inadequate, or otherwise unavailable, or when the threat of hostile attack necessitates dispersion beyond the limits of established port facilities. Terminal service units have the training and the equipment to operate beaches as well as ports.

h. The capability to clear supplies and personnel from terminals to inland destinations is often a limiting factor in military operations. Clearance

capability is the primary factor in determining port and beach capacity. The amount of transportation devoted to and the adequacy of the port and beach exits leading to lines of communication are considerations when computing throughput clearance capability. Hydrographic characteristics of the beach area, the weather, and topographic characteristics of the landing area also affect beach capacity. The availability of transportation assets and the capability of the inland destination to unload and return transport assets to the beach are limiting factors in logistics over the shore (LOTS) operations.

i. Special handling and floating equipment used in beach operations includes floating and mobile cranes, sectional steel pontoons, harbor craft, amphibious vehicles, landing craft, barges, tactical bridges, piers (barge type, self-elevating), rough terrain materials handling equipment, and other cargo discharge devices.

j. In present and foreseeable future LOTS operations, amphibious vehicles and helicopters will perform movement of general cargo from ship to inland points. Their use permits movement of oceanborne cargo directly from ships to dispersed inland transfer points with no rehandling at the shoreline. Where available, roll-on/roll-off shipping will transport wheeled and tracked vehicles overseas and will discharge the vehicles onto available causeways, beach discharge lighters, or landing craft. Vehicles discharged from the lighters at the shoreline will move inland under their own power or by towing.

11-10. Air Terminals

a. Although MAC units normally operate air terminals within the theater of operations, Air Force units of the theater command may operate some terminals. The bulk of personnel replacements to the theater and rotatees from the theater move by air. Army transportation teams provide liaison between Air Force units operating terminals and Army units receiving personnel. Construction of air terminal facilities in the theater of operations is an engineer service responsibility.

b. The COSCOM establishes and operates Army air terminals in the corps rear area to support Army air lines of communication. Facilities and services at these terminals provide the maintenance, movements management, and cargo transfer necessary to insure effective use of available aircraft in moving troops and supplies into and out of the airlift system. The senior officer of the aircraft units based at these facilities normally acts as terminal commander.

11-11. Motor Transport Terminals

Motor transport terminals, normally at both ends of a line haul operation, form the connecting link between local haul and line haul routes. Terminals provide vehicle dispatch service, main maintenance facilities, cargo transfer operations, and temporary holding areas for cargo backlogs and may contain, in whole or in part, trailer transfer facilities.

11-12. Rail Terminals

Rail terminals may include tracks, repair and servicing facilities, accomodations for train crews, and railheads. They are at originating and terminating points of trains and at sites that mark the limits of the rail operating divisions. A railhead is a small yard or terminal on or at the forward end of a military railway where troops, supplies, and equipment are transferred to other modes of transportation or distributed to using organizations. Normally the host nation operates rail terminals and facilities.

11-13. Temporary Holding Areas

The transportation command establishes temporary holding areas in terminals for handling cargo en route over lines of communications. The principal purpose of these holding areas is to provide facilities for in-transit cargo awaiting transportation. Facilities vary from open areas to large warehouses and elaborate rail, highway, water, or air facilities.

11-14. Transfer Points

a. The transportation command establishes points where transfer of cargo from one means of transportation to another is necessary and where both are available. A change of gage on a railway also requires such transfer points.

b. Transfer points generally use transportation command units and have such equipment as cranes, roller conveyors, and other special handling equipment.

Section IV. WATER TRANSPORTATION

11-15. General

a. The chief characteristic of water transportation is economical movement of large volumes of cargo at relatively slow speed over great distances. Its utility relates to the adequacy of loading and unloading facilities and its vulnerability. Water transportation includes ocean, coastal, and inland waterway shipping.

b. The military services and major joint forces submit requirements for intertheater water transportation through their respective service or joint channels to the appropriate elements of the Department of Defense. Requirements are then submitted to the Military Sealift Command (MSC). Intratheater requirements are submitted to the JTB which evaluates the requirements and submits recommendations to the theater commander.

11-16. Ocean Shipping

The MSC provides and controls ocean shipping. Primarily, the bases for military shipping requirements are the number of troops, amount of cargo to be transported, and length of the sea routes. Priority in shipping allocations to theaters of operations is in accordance with the overall strategic plan. A theater commander may prescribe ports of destination for vessels enroute to his theater. To meet requirements of the theater commander, the MSC may establish ship holding or diversion points to permit vessels entering the theater to be held or diverted at these points and moved to destinations as discharge facilities become available. The theater commander exercises control over ocean shipping allocated for intratheater use through MSC offices in the theater.

11-17. Coastal Shipping

The MSC, the US Navy, and, in some cases, the US Army operate coastal shipping. Coastal ships vary in size, but are normally shallow-draft vessels capable of operating in water areas where channel depths or maneuver area prohibits employment of deep-draft ships. Coastal shipping includes both self-propelled vessels and towed barges. A host nation monitors, and may control, all ship movements in its coastal waters.

11-18. Inland Waterways

a. The transportation command controls and operates US military inland water transportation. Inland water transportation is comparable to rail transportation in its ability to carry large tonnage and heavy single loads, but is slower. Inland waterways include lakes, rivers, and canals with adequate navigability to permit passage of barge traffic or river shipping. When present in a theater of operations, inland water transportation is a valuable means of moving bulk cargoes such as coal, construction materials, and bulk petroleum products. Use of inland water transportation frees faster means of transportation for higher priority shipments. Integration of inland waterways into the transport network is a means of dispersing and expanding transportation capabilities.

b. Inland waterways normally extend inland or along a coastal area from a deepwater terminal which serves as the base of operations for the inland waterway system. Considerations in planning, developing, and using inland waterways include—

(1) Seasonal floods and the drying up or freezing over of waterways.

(2) Availability of skilled indigenous personnel such as bargemen, pilots, and tugboat operators, to augment transportation personnel.

(3) Amount and condition of military and local equipment and facilities.

(4) Types of barges or craft suitable for the waterways.

(5) Engineer service requirements (construction of bridges and removal of obstacles, channel depths, widths and heights of clearances, development of transfer points, and feeder rail and highway nets).

c. Inland waterway equipment includes landing craft, barges, and towboats. Terminal facilities include piers, wharves, materials handling equipment, marine maintenance shops, and signal communications.

d. Inland waterways are extremely vulnerable to guerrilla activities. Destruction of locks, gates, floating equipment, siphons, aqueducts, levees, and embankment walls can deny the use of individual inland waterways for protracted periods of time.

e. Paragraph 8-4*f* discusses riverine operations.

Section V. RAILWAYS

11-19. General

a. Military personnel or civilians under military direction construct, maintain, or operate the military railways of a theater of operations that support US or Allied forces (FM 55-20). The military value of railways lies principally in their ability to haul large tonnages continually over long distances at a uniform rate of speed. However, rail transportation facilities (e.g., marshaling yards, large railroad terminals) present lucrative targets. Crowding of these facilities with rolling stock is to be avoided. Maintenance and repair equipment should not be concentrated in the yards. The enemy will probably attempt to destroy tunnels, deep cuts and fills, and bridges in the hope of paralyzing traffic throughout the rail net. Such interdiction may necessitate extensive repair and rehabilitation of rail lines

essential to logistic support. Railways are extremely vulnerable to guerrilla activities.

b. Rail operations in a theater are classified as phase I, II, or III, according to the degree of military effort required. Phase I is operation by military personnel. Phase II is operation by military personnel augmented by civilians. Phase III is operation by civilians with minimum military supervision. In addition, a friendly government may provide railway service to US forces.

11-20. Operations

a. The operation of military railways in a theater of operations is a responsibility of the transportation command and its subordinate railway units. In a landmass theater, the basic responsibility for railway operation may be with the host nation. By agreement or treaty between the United States and the host nation, US military units may supplement the host nation capabilities.

b. The transportation railway service is responsible for the movement and maintenance of ambulance trains. The Army Medical Department is responsible for staffing hospital cars, loading and unloading patients, and providing care en route.

c. Commanders of terminals, railheads, and supply activities are responsible for loading and unloading cars in the minimum time practicable. Railway cars are not used for storage, unless specifically authorized by the TA commander.

11-21. Equipment and Facilities

a. Fixed railway facilities include bridges, tunnels, trackage, terminals, yards, stations, buildings, repair shops, and fueling and watering facilities. There are three general classes of railway equipment—motive power (locomotives), rolling stock (passenger and freight cars), and special equipment (pile-drivers, cranes, and special maintenance equipment). The railway facilities make maximum use of civil railway equipment and personnel. These resources are obtained through civil-military operations staff channels.

b. Diesel-electric locomotive repair companies and car repair companies of the TAACOM perform general support maintenance on railway equipment and, normally, are located near important railway centers in the COMMZ.

11-22. Construction and Maintenance

a. Construction and maintenance of railways in a theater of operations are the functions of the ENCOM. Maintenance at the rail system is the responsibility of the transportation railway service. Responsibility for railway construction requirements normally rests with the TA commander. The great amount of time and the quantities of material required for new railway construction make it imperative to exploit existing railways. Reconnaissance and selection of railways to be rehibilitated are responsibilities of the transportation service in coordination with the engineer service.

b. The planning, engineering, installation, and maintenance of the military railway communications system is a function of the theater army communications command. Personnel organic to the transportation railway service operate military railway communications systems, which are constructed for their exclusive use.

Section VI. HIGHWAYS

11-23. General

a. Military highway transportation encompasses effective use of roadways and efficient operation of vehicles thereon. Military highway construction and maintenance of land lines of communications (LOC) in the theater of operations are engineer service responsibilities. For details on operation of convoy and military motor transportation, see FM 55-30.

b. Two forms of control—organizational and area—insure the most effective and efficient use of highways to support tactical and combat service support requirements.

(1) Highways in a specific area (e.g., the COMMZ or within the corps area) are under area control. Area control is superimposed on organizational control . It is used to the degree required to achieve orderly and effective movement of vehicles over the highway system. Control exercised by higher headquarters, such as theater army, may extend only to the designation of intersectional routes or as established by standing operating procedures (SOP) for coordination of combat and COMMZ highway movement. Area control is a command responsibility under the staff supervision of the appropriate command transportation representative. Higher headquarters has the prerogative to reserve routes for specified purposes, times, or organizations.

(2) The commander of the organization using a road exercises organizational control to insure compliance with rules of the road and traffic regulations. Measures taken include prescribing

schedules, speed, spacing, and routing; enforcing discipline; and providing for local security.

11-24. Traffic Control

Staff planning and coordination of traffic control are responsibilities of the ACofS, transportation, in the TA, TRANSCOM, and COSCOM: and the ACofS, G4, logistics, in tactical commands. Military police units perform traffic control functions within assigned areas of responsibility in accordance with approved traffic control plans. They provide the commander with the traffic control capability required in moving scheduled and unscheduled combat, combat support, and combat service support vehicles; and in the unscheduled military and civilian movements as outlined in the highway regulation plan prepared by the command traffic headquarters.

11-25. Highway Traffic Regulation

Highway regulation is a responsibility of the commander having area jurisdiction. Planning, routing, and scheduling movements on the available road net are done in accordance with priorities established by the commander. Corps accomplishes highway regulation by establishing highway traffic headquarters at division and COSCOM levels. In the COMMZ, this is a function of the movement control agency (MCA) assigned to TA. In addition to coordinating with the various other highway traffic headquarters, the highway traffic headquarters of the MCA coordinates all highway movements between the COMMZ and the corps area with the COSCOM highway traffic headquarters.

a. Corps Area. The COSCOM highway traffic headquarters works closely with the corps staff, the MCC, and provost marshal. Its main function is planning and allocating time and road-space requirements on the highway net in the corps area. The COSCOM highway traffic headquarters coordinates with division highway traffic headquarters on all movements entering or leaving the division area over controlled routes. It also exercises direct supervision over the highway regulation point teams which plan and supervise the use of the available road net and the employment of the transport capability of the COSCOM motor transport group. There also may be a combined MCC to coordinate intersectional movement requirements with movement capabilities of joint commands, allied forces, and the host nation. The COSCOM highway traffic headquarters coordinates with and influences the operation of higher and lower command elements.

b. Communications Zone. In the COMMZ, traffic regulation normally is applicable only to the main highway supply routes and certain essential feeder routes. The highway traffic headquarters of TA exercises control of routes. Requests for movement over those routes go to the highway traffic headquarters through local transportation movement offices, appropriate staff transportation offices, or highway regulation points.

Section VII. AIR

11-26. General

a. Air transport operations include those in which—

(1) Aircraft are available in specific numbers at a specific mission.

(2) Aircraft operate on a recurring schedule between airfields and/or heliports.

b. Important characteristics of air transportation are high speed and relatively unlimited choice of routes within aircraft range. Aircraft that can use hastily prepared landing fields and air terminals may be available in forward areas in the early phase of an operation.

c. The requirement for friendly control of air routes, susceptibility to adverse weather conditions, and vulnerability to air defense and other ground fire influence air transportation operations. Load capacity, range, fuel consumption, and landing facility requirements are additional limiting factors.

11-27. Intertheater and Intratheater Air Transportation

The MAC normally provides airlift services to, from, and within CONUS and theaters of operations. Civilian transportation, both on common carrier and contract basis, may supplement military air transportation.

a. Concepts in Logistical Air Support.

(1) Army forces will rely on the MAC fleet with commercial augmentation provided by the Civil Reserve Air Fleet (CRAF) to meet intertheater airlift requirements.

(2) The Army concept envisions use of Air Force delivery of cargo as far forward as the tactical and logistic requirements and capabilities permit. Also, the concept calls for use of Army helicopters to complement the Air Force fixed-wing air lines of communication (ALOC).

b. Requirements and Allocations, General. To

insure adequate supply by air, commanders develop estimates of the types and amounts of materiel to be delivered on a sustained basis. This action is essential for determining aircraft, air delivery equipment, and personnel requirements. Maximum benefits of supply by air can be attained only after analysis of land lines of communications, available airfields or drop zones at destination, availability of loading and unloading equipment and personnel, and the plan of operation.

c. Intertheater Requirements and Allocations.

(1) The military services and major joint forces submit requirements for intertheater air transportation through their respective service or joint channels to the appropriate elements of the Department of Defense.

(2) After evaluation by the Department of Defense and inclusion in its overall requirements, the respective elements forward the requirements to the MAC. The MAC makes allocations to the oversea theaters through the respective elements of the Department of Defense.

(3) The theater commander suballocates intertheater air transportation to each of the military services and to major joint forces in the theater. Each service or joint force suballocates inbound and outbound intertheater airlift to its components.

d. Intratheater Requirements and Allocations. Service components and joint forces in the theater submit requirements for intratheater air transportation to the JTB. The JTB evaluates the requirements and submits recommendations to the theater commander. The JTB also translates general policies and allocations of the theater commander pertaining to intratheater airlift into specific directives, to include designation of priorities, and establishes priorities by service or by type of cargo, as required. After theater component services and joint forces receive their airlift allocations, they deal directly with the area airlift force commander, establishing specific priorities within their allocations.

(1) *Theater army.* The theater army staff officer responsible for transportation recommends the most appropriate use of air transportation in theater army. Based on approved requests from major theater army commands and the amount of airlift allocated to theater army, theater army makes allocations to the major commands. Because of the influence of airlift on tactical operations, the corps allocates air transportation to division units. The theater army commander establishes priorities as required.

(2) *Theater army transportation command.* The transportation command is responsible to the TA commander for movement operations and coordination of Air Force airlift allocated to the COMMZ. Intratheater airlift allocated to the COMMZ moves cargo and personnel both in the COMMZ and from the COMMZ to the corps. Theater army may direct that a portion of the airlift allocated to the COMMZ be used to support each corps. The transportation command consolidates requirements for airlift in the COMMZ and requirements for airlift in support of corps. Based on these consolidated requirements, airlift capabilities, and established priorities, the transportation command, in coordination with the TA MCC and appropriate Air Force elements prepares the air portion of the TA movement plan.

(3) *Corps.* Routine airlift requirements are submitted through operational channels to the echelon having authority to direct performance of the mission. Normally requests from divisional units are consolidated and approved at division and forwarded to corps. Nondivisional units in the combat zone also submit requests directly to corps. Requirements for airlift are consolidated at corps and submitted to theater army where they are used in the movement management process. Management of theater airlift resources allocated to corps is the responsibility of the COSCOM ACofS, transportation. Allocations to corps are normally expressed as tonnage for air delivery. Within these allocations the corps commander specifies the type of materiel to be delivered, the schedules for delivery, and destinations. Corps further allocates available airlift to its subordinate elements based on previously submitted requirements.

e. Delivery of Supplies and Equipment, General. Air movement in the theater of operations is an expeditious method of supply and is integrated into the system at theater level. The increased mobility and dispersion of combat units make air movement not only desirable but often essential. The Army or the Air Force may provide the aircraft. Corps and divisions provided Army aviation units should not consider these units available for integration into the theater airlift system as normal employment. Air supply may be accomplished by landing the aircraft or by dropping supplies from aircraft in flight (parachute or freedrop).

(1) Air landing is the more desirable method of delivery, since it results in the least loss and breakage of cargo, reduces handling, and makes the most efficient use of airlift cargo space. Aircraft landing areas for fixed-wing aircraft normally require some preparation, depending on the area and the type of aircraft. The use of rotary-wing aircraft may, though not normally, require prepared sites with access roads, hardstands, and dust control.

(2) Airdrop, although less efficient than air

landing, is a highly useful method of delivery. Where evacuation is not a factor, air delivery has significant advantages. It reduces aircraft vulnerability and the need for forward landing fields. Types of airdrop are low-velocity drop, high-velocity drop, freedrop, and low level extraction.

(*a*) Low-velocity drop employs one or more parachutes to retard the rate of descent. Normally, this method uses energy-absorbing materiel for delivery of fragile items and heavy equipment, such as field pieces and vehicles.

(*b*) High-velocity drop employs a small parachute or other device to orient the dropped load with minimum retardation of the rate of descent. Cushioning materials or other devices attached to the load absorb the shock of impact.

(*c*) Freedrop employs no retardation devices and provides minimum cushioning and padding materials. It is used for fortification material, communications wire, baled clothing, and other items that will not be damaged appreciably by impact.

(*d*) Low-level extraction is the method of air delivery by which equipment or supplies are extracted from the cargo compartment of an aircraft flying in close proximity to the ground. An extraction device extracts the load, retards its forward momentum, and tends to prevent tumbling. The low altitude reduces requirements for cushioning materials and improves accuracy of load delivery.

f. Air Force Organization and Responsibilities for Delivery. Discussions of Air Force organization and responsibilities for delivery are included in JCS Pub 3 and FM 100-27.

11-28. Army Aviation

a. Mission. Army aviation augments the capability of the Army to conduct prompt and sustained land combat operations. Army aviation is integrated into combat, combat support, and combat service support units of the Army when the employment of Army aircraft will benefit Army operations. For details on Army transport aviation, see FM 55-1, FM 55-40, FM 100-27, and AR 59-106.

b. Functions. Functions performed by Army transport aviation in the combat support and combat service support roles include—

(1) Air movement of supplies, equipment, and replacement personnel and units when ground lines of communications are non-existent or inadequate, when aircraft are operated on a recurring schedule between airfields or heliports, or when the concept of operations requires speed and mobility not obtainable by ground means.

(2) Evacuation of patients in augmentation of aeromedical evacuation performed by Army Medical Department air ambulance elements.

(3) Offshore discharge of container ships and movement of other types of unitized equipment from ship to shore.

(4) Clearance of cargo from air and sea ports.

11-29. Emergency Supply by Air

a. Requests. Requests for emergency supply by air are a staff responsibility of the logistics officer. Requests for supplies may originate at any level and will be processed through materiel supply channels at each combat service support echelon by the fastest available communications until the item is located. The MMC that locates the supplies then places a request for air movement of the item from the stock point to the consumer. Both the requests for the supplies and the request for airlift are coordinated through the TOC at each echelon. The requesting unit normally recommends the type of aircraft and the method of air delivery.

b. Delivery. The MCC at the echelon of command where the supplies are available arranges for delivery. If it is at corps level, there are four air delivery options from which to choose. The mission may be accomplished by COSCOM combat service support aircraft, organic corps combat support aircraft, by Air Force airlift allocated to corps by theater, or if the requirement exceeds the corps resources, the movement request may be passed to the TA MCC for accomplishment. An Army air drop supply company located at or near the air terminal or supply point prepares the supplies if air drop is the delivery mode selected. The unit requesting the emergency air supply is responsible for selecting, preparing, and marking the drop/landing area, and providing qualified ground movements guides and unloading teams to expedite aircraft turn around. The supported unit also recommends approach and departure routes for the aircraft when the enemy situation or terrain warrants, and is responsible for security of the delivery area. Units receiving air drop supplies are responsible for recovery and return to the supporting units of all non-expendable materials used to unitize or rig the supplies for delivery.

Section VIII. TRANSPORTATION FOR STABILITY OPERATIONS

11-30. General

Stability operations require a reliable transportation system that is responsive to the requirements generated by the tactical are logistical missions. The

system must be capable of operating over varied and difficult terrain and of using various modes of transportation, including means not normally organic to units. The method of accomplishing movements and the modes of transportation to be used will depend on the situation. Hostile action, whether imminent or unlikely, will influence the planning and execution of transport operations. The availability of transport modes will govern the selection of equipment to accomplish the moves. Characteristically, there are numerous requirements for transportation support of such nonmilitary activities such as civic action, refugee movement, and relief supply. Control of transportation should pass to the appropriate commander during operations and revert to the parent unit upon completion of the mission.

11-31. Problems

Special transportation problems in insurgent areas result from abnormal distances, difficult terrain, lack of signal communications, and the probability that movements will be subject to attack, harassment, and delay. When minimum essential items required to support unit operations cannot be carried by soldiers or by organic vehicles because of terrain conditions, other modes of transportation carry these items. The use of these modes of transportation should be planned far in advance along with adequate control measures.

11-32. Security

All modes of transportation are subject to ambush, attack, sabotage, capture, and destruction. It is highly probable that insurgent intelligence will be adequate to advise insurgent forces on *what* is going *where* despite efforts to maintain security. Therefore, efforts to keep knowledge of the *when* and the *who* secure and limited to key personnel take on added importance.

a. In transporting cargo during stability operations, a special consideration is the type of cargo to be transported. Certain items of great value to insurgents will require greater security. They may require the use of priority (air) transportation to lessen the possibility of capture or destruction.

b. Because of their speed, relative security from ground attack, lack of sensitivity to terrain conditions, and adaptability to small unit movement, aircraft frequently will be the most effective means of supply or troop movement. Both Army aviation and aviation of other military services are used. Terrain, the tactical situation, and availability of airstrips and/or heliports will determine modes of air resupply.

c. En route security must be provided for surface movements. Appropriate measures include intensive training of drivers; armoring and arming of vehicles involved; and use of armed escorts, military police, and attack helicopter escorts.

CHAPTER 12

LOGISTICS—PROCESSING AND SHIPPING RETROGRADE MATERIEL

Section I. GENERAL

12-1. Introduction

This chapter discusses the logistics aspects of processing and shipping retrograde materiel from a theater of operations.

12-2. Definitions

Definitions, as they pertain to logistics, are—

a. Retrograde Materiel Actions. Those actions that include the recovery, evacuation, processing, and shipment from a theater of operations of Department of Defense equipment and supplies which are excess to the requirements of that theater.

b. Redeployment Materiel Actions. Those actions that include the processing of equipment and supplies belonging to redeploying units.

12-3. Sources

The redeployment of units results in the major portion of the retrograde tonnage. There are three principal sources of retrograde materiel.

a. Equipment in a redeploying unit's possession.

b. GS and DS stocks no longer needed due to reduced requirements.

c. Equipment accumulated through the normal evacuation of combat losses.

Section II. RETROGRADE MATERIEL TASK

12-4. General

The retrograde materiel task can be divided into three major functions: identification, processing, and shipment of retrograde materiel. Within each function, there are numerous subfunctions which must be completed.

12-5. Identification and Inspection

a. Identification. Identification of excess materiel can be done at any level. Retrograde materiel, however, must meet established standards measured by the following criteria:

(1) *Needed in the Army inventory.* Most retrograde items are standard military equipment needed to replace Army materiel in the supply system. During a retrograde operation, requirements for US Government agencies must be reviewed and the excesses screened to fill these requirements. Normally, much of the commercial equipment will be disposed of through in-theater property disposal channels.

(2) *Needed to support the rebuild program.* Whenever a major end item is uneconomical to repair, the assemblies and components that can be used in support of CONUS and offshore rebuild programs should be stripped from the major end item and processed separately for retrograde action.

(3) *Must not exceed maintenance expenditure limit (MEL).* The maintenance expenditure limit—or MEL criterion—is applied to each major end item after technical inspection. The MEL varies by age and type of equipment, but seldom exceeds 65 percent of the acquisition cost. To determine if it is economically feasible to process an item for retrograde action and rebuild it, the cost of transportation and cost of repair are added. The resultant sum must not exceed the MEL. In practice, this criterion would permit repairs to be made in the theater on many items for which the MEL would be exceeded with CONUS repair due to increased labor and shipping costs. Close coordination is required between the materiel management activities in the theater of operations and the responsible CONUS NICP to insure accuracy in computing labor and shipping costs. These costs significantly govern the decision to retrograde an item for repair or to dispose of that item in the theater and should include consideration of ship and plane space returning to CONUS not fully utilized. Lack of accuracy in computing these costs employing the most current cost data can result in uneconomically repairable equipment being retrograded to CONUS depots (with a resultant waste of transportation assets) or economically repairable equipment being disposed of in the theater.

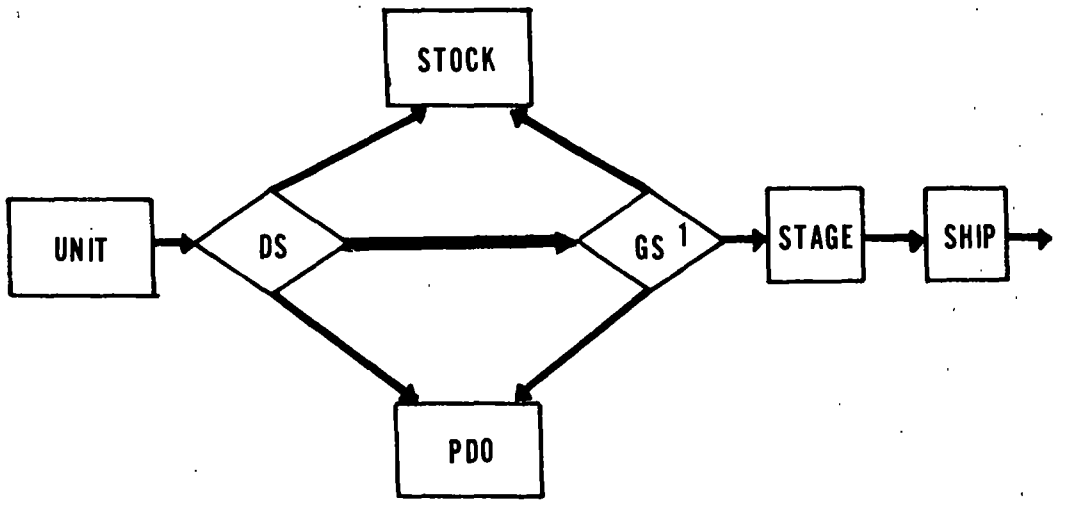
b. Inspections. A complete technical inspection

(TI) should be performed when time permits. However, an abbreviated TI is required to handle large quantities of retrograde equipment rapidly. The Department of the Army and the US Army Materiel Command establish the inspection procedures. The inspection procedures must provide for rapid inspection and classification of a large volume of materiel. The technical inspection (however abbreviated) must contain a quality control check to insure the removal of hazardous material prior to retrograde processing. Since the maintenance facility at the final destination must have the capability to repair the item, its final destination would be indicated by the category of maintenance required. Quality assurance over handling, packing, packaging, and movement must be maintained to insure retention of the maintenance classification status. After the equipment is inspected and classification made, shipping damages may result in a total loss of the item at destination. Obviously, a monetary loss results when equipment becomes uneconomically reparable due to mishandling in transmit after processing shipment costs have been incurred.

12-6. Processing

a. General. During actual processing, retrograde equipment is accounted for, inspected, maintenance classified, cleaned, and packed for shipment. The retrograde process must be analyzed to insure that the processing capability equals or exceeds the tasks to be accomplished. An example of evacuation and retrograde flow is shown in figure 12-1.

b. Documentation. Units turn in equipment to the collection and classification service company or other designated processing unit, utilizing DA Form 2765-1 (Request for Issue or Turn-In). The processing unit then ships the equipment, utilizing DD Form 1348-1 (DOD Single Line Item Release/Receipt Document), and a copy is sent to the appropriate MMC. If disposition instructions are not available, the processing unit requests disposition instructions from the MMC. Each receipt and shipping transaction is reported to the MMC.



[1] GS facilities may be bypassed when retrograde criteria have been met.

Figure 12-1. Evacuation and retrograde flow of army materiel (schematic).

12-7. Shipment

Timely disposition instructions for equipment are essential for the orderly flow of retrograde, since delays create backlogs at staging areas and repeated handling and sorting of equipment. Predisposition instructions (i.e., the destination is known in advance) facilitates the projection for and receipt of ships and aircraft for movement of the cargo. Control over the retrograde assets must be centralized with disposition instructions being furnished from DA and the theater involved. Containerized shipments should be used extensively for smaller multiple items. These containers—commercial or government-owned (or leased) shipping container (SEAVAN), military-owned demountable container (MILVAN), and roll-on-roll-off container—offer speed, security, and throughput capability from distant processing points to port.

Section III. SUPPORT REQUIREMENTS

12-8. Organization

a. Staff. The organization for redeployment operations is dependent on the theater force structure. If the theater is fully developed, the TAACOM would conduct the operation for the most part and the TA MMC would coordinate and manage the theater retrograde effort. However, this operation can be conducted by any unit that has the resources that are either organic or allocated by the theater army commander to perform this mission. The following items should be considered:

(1) For small-scale retrograde operations, retrograde planning can be accomplished among the functional staff offices of the applicable headquarters, e.g., ACofS, materiel; ACofS, plans operations and intelligence; ACofS, transportation; and ACofS, services.

(2) For large-scale retrograde operations, a separate staff element may be necessary to handle efficiently the magnitude of the tasks. This separate staff would provide centralized planning and staff supervision for the overall program.

(3) Under either method of operation, quality assurance must be maintained, and Medical Department expertise must be utilized to insure that quarantine requirements are met.

(4) The capability to retrograde equipment and supplies may be an overriding consideration in the theater's redeployment plan. Therefore, the logistics support portion of the redeployment plan may indicate that this support would be the restricting factor for the operation.

(5) Accountability for assets being turned in for retrograde is a paramount consideration. The volume of items involved in retrograde operations and urgency associated with unit deactivation/redeployment may result in command pressures to expedite retrograde processing and movement. Irrespective of such pressures, the need for accurate accountability to prevent loss of assets retains its importance. An audit trail must be established to permit visibility of retrograde material from turn-in to ultimate destination.

(6) The MMC plays a key role in planning and controlling the retrograde operation by obtaining disposition and shipping instructions from CONUS NICP; providing workloading instructions to C&CS and GS maintenance and supply units; providing technical processing, disposition and shipping instructions to maintenance and supply units involved in the retrograde operation; coordinating bulk shipping requirements and schedules with the MCC; identifying and diverting incoming supplies for deactivating or redeploying units; redistributing supplies and equipment within the theater resulting from unit deactivations or redeployments; and providing continuous asset visibility.

b. Units. It is necessary to determine the total processing workload by type and density of equipment in order to retain a proper mix of units to support retrograde and redeployment operations. Accurate inventory reports from units, support units, and storage areas are essential in making this estimate. Analysis of this total requirement provides the foundation for improving the capability to handle the retrograde materiel. Requirements should be matched against TOE capabilities and experience factors in order to determine the number and type of units required to accomplish the workload in a given period of time. These units normally are under the centralized control of the TAACOM or COSCOM, as applicable. Force planning procedures to insure an adequate support force with the proper mix of units are as essential to retrograde planning as they are to the introduction of forces at the commencement of operations.

12-9. Facilities

a. Location. Location is a key factor which determines the processing unit's capability to conduct retrograde operations.

(1) The retrograde facilities should be located at or in close proximity to an ocean and/or aerial port, and have access to the following:

(*a*) Main supply route (MSR).

(*b*) Storage locations.

(*c*) Fresh water supply.

(*d*) Security to prevent pilferage and unauthorized cannibalization.

(2) The MSR should provide overland access to the retrograde facility and be supplemented by the inland waterways and the aerial port. The storage locations receive the equipment designated to remain in the theaters. Since fresh water is essential for the cleaning of equipment, a natural fresh water source such as a lake or stream must be available.

b. Structures. A retrograde processing facility must have numerous vehicle racks capable of handling all of the equipment being processed, including the heaviest piece of equipment. Shelter (buildings or tents) would have to be provided for administrative purposes, processing use, and housing for organic and transient personnel.

c. Physical Layout. This physical layout of a retrograde processing center is designed to accommodate two types of equipment, rolling stock

and other major items. Rolling stock includes everything with wheels or tracks, while other major items includes weapons, communications equipment, and other items not classified as general supply either organic to the rolling stock and removed for processing or separate major items in themselves. Aircraft, missiles, and their components, as well as medical items, are processed at separate facilities. A sample retrograde layout is shown in figure 12-2.

(1) *Rolling stock.* The physical layout of a retrograde processing center for rolling stock should include reception, inspection and cleaning, sorting, and staging areas. The functions of each are described in (*a*) through (*d*) below.

(*a*) *Reception area.* In the reception area, preparation for redeployment or the turn-in of equipment is conducted. Accountability (documentation), precleaning, and redistribution are the major functions of this area.

(*b*) *Inspection and cleaning area.* At the inspection and cleaning area, equipment is cleaned, inspected, and lubricated. For optimum operations, servicing racks should be constructed in sufficient length (up to 100 feet long) to perform these three tasks simultaneously. In lieu of long racks, multiple racks in line would be an adequate substitute. The former method is preferable because of the difficulties encountered in movement and handling of unserviceable, heavy equipment. Unserviceable equipment, particularly tracked vehicles, requires a stable hardstand made of concrete around and under the service racks. This pad must be sloped under the wash area for proper drainage since a great quantity of water is used in cleaning.

(*c*) *Sorting area.* In the sorting area, equipment is sorted by classification and destination. The transportation control and movement documents (TCMD) are prepared and distributed to final destinations.

(*d*) *Staging area.* The staging area is primarily a holding area for equipment or materiel prepared for shipment. It may also be an overflow area for a similar area at the port. Hardstand areas must be utilized to maintain equipment cleanliness.

(2) *Other major Items.* The processing area for other major items can be separated from the rolling stock area, but, to facilitate operations, it must be nearby. In all cases, however, the reception area and staging area should be common to both the rolling stock and other major item areas. The area for other major items will have organic cleaning, inspecting, testing (for communications-electronics and similar items), packing, documenting, and accounting capabilities.

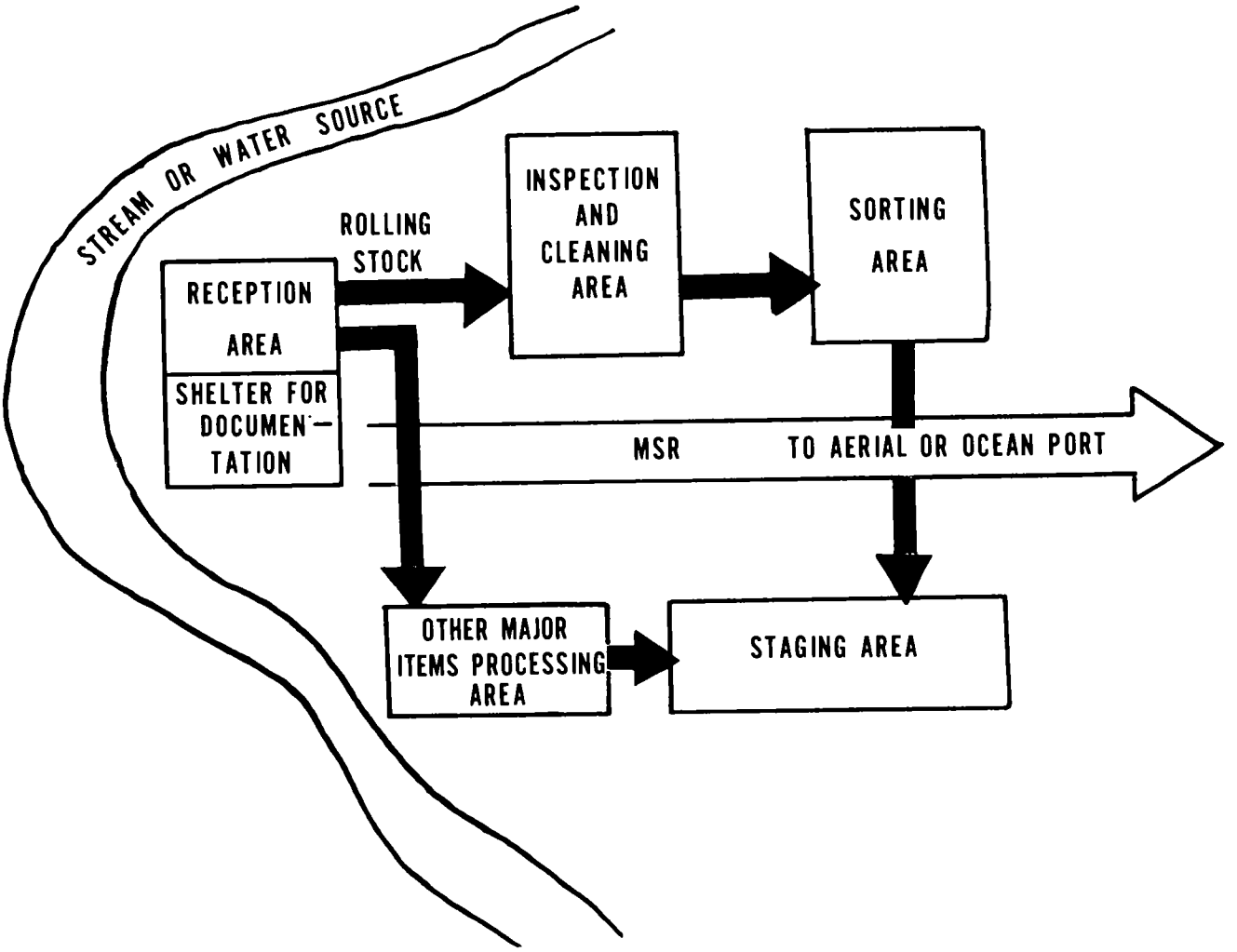


Figure 12-2. Sample retrograde processing layout (schematic).

12-10. Supporting Material

Supporting material includes packing, packaging, and preservation items, lashing material for ship's cargo, and water cleaning equipment. Special packaging materials and equipment such as foam packing machines and materials, may be necessary for processing of sensitive equipment. Stockage and replenishment of this material and equipment must be preplanned and controlled to meet the requirements of the retrograde program. The high-pressure, low-volume water cleaning machine, commonly called the "water blaster," is the primary equipment used to clean vehicles adequately to meet the US Department of Agriculture quarantine standards. It should also contain an area suitable for the staging of containers (MILVAN, SEAVAN, etc.) to support the retrograde of multiple items.

Section IV. RELATED ACTIONS

12-11. Ammunition Retrograde

A principle item eligible for retrograde includes ammunition excess to in-country requirements. Unserviceable ammunition and ammunition components are included. Basic requirements and procedures for the retrograde of ammunition are as follows:

a. Location. Special consideration will be given to selection of locations for processing retrograde ammunition. The handling, inspection, processing, and storage of munitions differ from other commodity classes and must be treated as a hazardous commodity. The selection of the location, quantities to be stored by class, and safety requirements are to

be in conformance with the prescribed methods and procedures outlined in TM 9-1300-206 and FM 9-6.

b. Structures. To the degree possible, the structures used for processing and placing items in final state for shipment should be covered to afford protection to the items being processed. The structure should contain sufficient space to accommodate the operating crew, tools, equipment, and operating supplies.

c. Physical Layout. The physical layout of the processing center is to be designed to provide for receiving areas, inspection and segregation areas, processing area, and holding areas for processed ammunition awaiting final shipment. Ammunition will be the only commodity processed in this area. Other materiel not compatible with ammunition will be processed at other locations. TM 9-1300-206 will be used for determining the appropriate quantity distances for the various classes of ammunition that are to be stored and processed.

d. Procedures. The procedures for rapid deployment, redeployment, and retrograde are contained in TM 750-172 through TM 750-178 and TM 750-210. In addition, written standing operating procedures are to be developed for all operations involving ammunition. The format for development of SOP is contained in FM 9-6.

12-12. Contingency Plans

Short notice for redeployment can be expected, due to last minute decisions and delayed announcement of the specific units or materiel to be deployed. Therefore, contingency plans for various redeployment situations must be made an inherent, continuing requirement in logistics planning.

12-13. Pipeline Cancellation

Once a unit is announced for redeployment, all orders to CONUS for equipment and supplies for that unit must be cancelled. During redeployment operations, theater resupply requirements will fluctuate rapidly, due to changing demands for repair parts and replacement items, lower usage factors, and declining inventory requirements. Therefore, strict control of theater assets and requests for replenishment stocks is essential. The theater should utilize supplies generated from redeploying units to fill the residual forces' needs.

12-14. Excess Equipment

Excess equipment should not be tolerated in a command since it places a burden on the logistics system at all times. However, when excess equipment is detected within a command, provision must be made to simplify the turn-in of excess equipment so that it is not disposed of in an unauthorized manner.

12-15. Recovery, Collection, Classification and Disposition of Materiel

Additional information on the recovery, collection, classification, and disposition of materiel in the Army in the field is contained in AR 755-5, FM 29-23, and FM 29-24.

CHAPTER 13

LOGISTICS—OTHER SERVICES

Section I. CONSTRUCTION

13-1. General

a. Construction is the building or rehabilitation of facilities for military forces in theaters of operations. Construction includes the fabrication and rehabilitation of structures, utilities, roads, pipelines, railroads, bridges, airbases, air terminals, marine terminals, defensive works, and protective works.

b. Construction provides for the mobility of military units. The ability to concentrate construction efforts rapidly, in order to overcome obstacles created either by nature or by enemy action, permits faster movement on the battlefield, thus increasing mobility.

c. The nature of the conflict and the operational environment have a direct influence on military operations and are major factors in shaping theater construction policies. The concepts of increased mobility and dispersion of forces and installations in a nuclear war also directly influence the type and scale of construction work in the theater of operations. Some of the tactical and combat service support demands imposed are construction support of the US Air Force, camouflage of critical installations, and construction of the following:

(1) Protective shelters for critical installations, personnel, and supplies.

(2) Air defense installations for essential areas.

(3) Theater-controlled dummy and decoy air defense positions.

(4) Main supply routes.

(5) Secondary and access roads serving dispersed installations and facilities.

(6) Beach and air lines-of-communication facilities.

13-2. Construction Policies

a. In an active theater, only minimum essential construction work and development of installations and facilities is authorized. The use of permament-type materials (e.g., brick, tile, stucco, and concrete) is authorized when—

(1) An agreement exists with the government of the host country to provide such construction, and then only after prior approval of the Department of the Army.

(2) Materials normally used in minimum essential construction are not available or will not be available in time to meet construction schedules, and permanent-type construction materials are available or can be available in time to meet construction schedules at no increase in total construction cost. (When permanent-type construction materials are used, the interior and exterior finishes of structures must be in keeping with minimum essential construction standards.)

b. Standard facilities for such installations as hospitals and shelters are designed for use in active theaters of operations. Standard facilities present the simplest method of using standard materials to construct acceptable installations, reduce the variety of construction materials required, simplify supply procedures, and reduce costs.

c. Construction priorities, compatible with instructions from higher echelons, are assigned at each command echelon. These priorities vary with the strategic or the tactical situation, the climatic and geographic environment, and the mission of the command.

d. Construction proceeds at maximum speed with a minimum of materials, equipment, and skilled labor.

e. Construction engineers make maximum use of the designs of installations and facilities contained in the technical manuals that pertain to the Army Facilities Component System (AFCS). These manuals provide necessary drawings, plans, and bills of materials for the majority of the command and repetitive construction tasks encountered in an active theater of operations. They are appropriately coded for use with automatic data processing systems and advanced supply procedures. Use of these manuals assists in construction planning, programing, and review, as well as in procurement, distribution, and control of construction material (AR 415-16, TM 5-301, 5-302, 5-303).

f. New design, when necessary, is simple and adaptable to multipurpose use and future expansion.

g. Protective construction is defined and discussed in JCS Pub 3. Such construction is applicable only to those facilities where continuity of activity is of sufficient priority to warrant protection.

13-3. Responsibilities

a. The theater commander establishes plans, policies, and priorities for construction, based on coordinated planning by construction representatives of theater army, navy, and air force. See Paragraphs 4-11 and 4-12 regarding base development planning.

b. The theater army commander discharges his construction responsibilities through an engineer command (ENCOM). In accordance with base development plans, policies, and priorities established by the theater commander and based on recommendations of the theater army engineer (ENCOM commander) and other staff elements, the theater army commander establishes construction policies, standards, and priorities, and issues construction directives. The theater army commander is responsible for Army construction support throughout the theater, including that performed for other US military services and government agencies and for support of Allied forces as may be directed by commanders of appropriate joint, unified, or combined commands.

c. The ENCOM commander accomplishes this mission by supporting theater army subordinate commands with task groupings composed of appropriate engineer troop units and other arrangements for support such as contractual services. This may include accomplishment of combat construction support tasks within the tactical areas of responsibility of field commands in accordance with priorities established by the theater army commander. Under the foregoing conditions, requirements of the TA major commands in the COMMZ will normally be fulfilled through allocation of ENCOM effort and resources to these activities on a mission, task, or area basis—or combinations thereof—with suitable arrangements for command control, such as direct support, general support, operational control or attachment, as may be apporpriate.

d. The corps commander is responsible for construction in the corps area, except for those interzonal projects common to both the combat zone and the COMMZ. Required construction within the normal direct combat support role is usually temporary in nature and is performed by the corps engineer brigade units. These units should not be employed on extensive sophisticated construction projects as this detracts from their primary combat support mission. The normal method of employing ENCOM construction units in the combat zone is on a task or mission basis, as opposed to attachment or direct support (FM 5-162).

13-4. Construction Support in Stability Operations

Developing countries in which stability operations may be conducted frequently require much light construction. Demolition and sabotage operations by insurgent forces may aggravate the situation.

a. Construction support may include provision of combat bases, security posts and their defenses, and communications facilities; an adequate ground transportation system; extensive airstrips, airfields, and helicopter pads to support aviation of both the Army and other military services; essential construction of resettlement areas; and support of the local population in military civic action projects.

b. The scope of the construction effort requires maximum use of local labor and materials obtained through coordination with CMO staff and CA units. Additionally, using units will have to participate to a greater degree than is normal in construction of facilities for their own use.

Section II. LABOR

13-5. General

a. Scope. The labor function of combat service support includes the use of personnel resources in theaters of operations to further the military effort. It is concerned with the procurement, management, and use of labor available from—

(1) United States and Allied military service units.

(2) Prisoners of war and civilian internees.

(3) United States, Allied, neutral, and enemy civilians, including refugees, evacuees, and displaced persons. The basic policies on the subject are contained in JCS Pub 3.

(4) United States military prisoners.

b. Planning. To release as many military personnel as possible for combat duties, planning calls for maximum use of all sources of noncombatant personnel (*a* above), consistent with operational and security requirements, essential civilian needs, and international law and agreements to which the United States is a party. Planning for operations in any geographic area must include an estimate of available manpower and its capabilities in relation to requirements. Planning must also provide for the porcurement, use, and administration of this manpower in support of the combat forces.

c. Enemy Actions. Enemy employment of mass casualty and mass destruction weapons in the

theater will complicate the maintenance of a civilian work force in probable target areas, such as troop concentrations and critical combat service support installations (para 2-4*f*).

d. Geneva Conventions. The United States is a party to the Geneva Conventions of 1949 which contain provisions for the treatment of prisoners of war and the protection of civilians during hostilities. Pertinent provisions of these treaties are contained in FM 27-10, DA Pam 27-1, and DA pam 690-80.

e. Information Program. Because the labor force may represent a sizable portion of the local population, control of the people may become difficult under certain conditions. Upon the formation of the labor force, the initiation of an information program may lessen the panic and disorganization resulting from catastrophic conditions.

13-6. Sources and Types of Labor

a. Civilian Employees. A general policy of the Department of Defense is that civilian personnel are used in all positions that do not require military skills or military incumbents for reasons of training, security, or discipline. Oversea areas make maximum use of the services of host country nationals and other locally available civilians. United States civilians and third country nationals are imported into such areas only to the extent necessary to the security of the forces or when required skills are unobtainable from local sources. Although mobile labor may be required for emergency support of certain critical activities, local civilian residents meet on-site requirements insofar as practicable. Paragraphs 14-10 through 14-12 discuss methods of employment and administration of civilian personnel, both US citizens and foreign nationals, in support of Army operations under various conditions. Two methods of employing foreign nationals in occupied enemy territory are through—

(1) *Requisition demand.* In occupied enemy territory, when labor is procured by requisition demand on the local government, that government will be responsible for furnishing, administering, and paying such personnel, and the US Forces will observe the provisions of the Hague and Geneva conventions in their utilization. The terms and conditions of employment and the practices of the government agency in the administration of requisitioned personnel will not initially be interfered with except as may be necessary to assure effective operations and avoid conditions or practices which would reflect discredit on the fairness and humaneness of the US Forces. As the occupation progresses, however, and conditions become more stable, it may become necessary to direct changes in administration to meet the needs of the occupation forces and US international relations objectives. At the cessation of hostilities, especially when a lengthy occupation is anticipated, a complete review should be made to assure that employment practices relating to local national personnel furnished the US Forces are effective and equitable to all concerned.

(2) *Hire direct.* In case it is not feasible to obtain local national civilian personnel by requisition in occupied enemy territory, the US Forces may hire such personnel directly and charge their wages and any other expenses to the enemy government as a cost of occupation. The Hague and Geneva conventions will be observed in their administration and employment (DA Pam 690-80).

b. Contractual Services. Engagement of a resident contractor to provide the service or product desired can reduce, in part, the need for hiring and supervising labor. Contractual agreements include logistic support, if any, provided the contractor for his personnel. In contract negotiations, care is necessary to insure that employment conditions are in accordance with applicable local laws and regulations, and that wage scales paid by the contractor are in agreement with those applicable to labor hired directly.

c. Type B Units. Type B units are TOE service organizations that integrate US military and non-US personnel into a work force. Such units contain the necessary equipment and the minimum number of military personnel required to perform the unit mission. To the extent permitted by international law and agreements, civilian personnel fill non-critical spaces in the organization. United States forces normally provide these civilians logistic support in accordance with theater or theater army directives.

d. Enemy Prisoners of War/Civilian Internees/Detainees. Chapter 20 contains the basic policies and procedures for the use and administration of prisoner of war labor. To obtain maximum use of prisoners, work assignments should be in accordance with their training skills. Proper classification of specialists and provision of necessary equipment and administration will assist in the use of prisoner of war labor.

e. Labor Pools. Analysis of the labor needs of each installation determines the amount of permanent labor necessary and the amount that a general labor pool can furnish to meet fluctuating demands. Combat troops work as laborers only as a last resort.

13-7. Responsibilities

Paragraphs 14-3 through 14-6 and paragraphs 14-10 through 14-12; FM 101-5; and Department of the

Army civilian personnel regulations (CPR) discuss staff responsibilities for manpower management and general labor activities. Chapter 6 and FM 41-10 define civil affairs responsibilities.

13-8. Labor Support in Stability Operations

The movement, maintenance, and storage of supplies may require a large labor force. The initial need for local skilled labor may be particularly severe in stability operations because of the requirement to establish a combat service support base and the need to build up storage sites, airfields, and transportation facilities.

a. Availability of Local Labor. Usually, there is an adequate amount of unskilled labor in underdeveloped areas. There is generally large-scale unemployment or underemployment, and the economy of the area can afford the siphoning of a portion of its manpower.

b. Inhibiting Factors. Although large reserves of labor may exist in underdeveloped areas, certain factors may inhibit the availability of this labor.

(1) *Health and sanitation.* Existing health and sanitation conditions may reduce the size of the physically fit labor force and increase the number of persons needed to accomplish specific tasks.

(2) *Labor force mobility.* The labor force in these areas may not be mobile. Laborers may have close village and ancestral home ties that they will be reluctant to sever.

(3) *Location.* Most of the readily available labor is in and around the cities and towns.

(4) *Politico-military situation.* The availability of local labor will depend on such factors as the nearness of military operations to the cities; local reaction to the insurgent threat and fear of reprisals; attitude of the local population toward the government, the United States, and US forces; and the degree of authority exercised by the local government.

c. Use of Local Labor. Besides limitations on availability of local labor, there also may be limitations on use of the labor. The people may have a high aptitude for learning and, once taught, an ability to operate complex modern machinery and equipment; however, time available will make it impossible, in many cases, to undertake the necessary training. This is especially significant when there is a language problem. Logistic tasks in which local labor can be used effectively include unloading operations; transportation of supplies and equipment from unloading sites to supply points and dumps, transportation of pack loads over difficult terrain, construction tasks, crating and uncrating supplies, other general labor tasks at storage locations and supply points, and evacuation of patients by litter.

Section III. MISCELLANEOUS SERVICES

13-9. Field Services

Field service functions include laundry, bath, clothing exchange, bakery, textile renovation, salvage, decontamination, graves registration, clothing, post exchange sales, and provision of general duty labor. Such services are provided by field service, GS, companies and supply and service, DS, companies assigned directly to support groups or to separate supply and service battalions.

13-10. NBC Counteractive Services

Services available to counter the effects of enemy nuclear, biological, or chemical operations include—

a. In the corps, decontamination platoons of the field service general support companies perform decontamination of critical equipment and supplies and vital installations and areas beyond the capability of using units. In the COMMZ, decontamination teams attached to the supply and service company in the area support groups of the TAACOM perform decontamination. Engineer and other units equipped with bulldozers and other types of earth-moving equipment also perform vital area decontamination. Large-scale decontamination, however, is expensive in terms of manpower and logistic effort; it is not normally undertaken unless the area affected is of critical importance or the installation involved cannot be moved. Mobile laundry units of field service general support companies provide a limited capability for decontamination of clothing.

b. Mobile laundry elements of field service general support companies perform impregnation and reimpregnation of clothing.

c. Engineer units construct permanent and semipermanent protective shelters and install collective protectors provided by supply units.

d. The general chemical laboratory provides chemical, biological, and radiological (CBR) laboratory services for the theater. Identification of chemical agents and radiological isotopes and the laboratory analysis of CBR materiel in support of the theater intelligence mission are the primary areas of

interest. Identification of enemy biological agents is a function of the medical laboratory. Within priorities established by the theater commander, the general chemical laboratory provides laboratory development of field expedient items and procedures for use in CB agent detection, CBR agent sampling, and CBR protection and decontamination in support of the theater operational mission. The laboratory also provides analysis of chemicals and other items procured or stored in the theater in support of the theater supply mission.

13-11. Real Property Maintenance Activities (RPMA)

The ENCOM is responsible for real property maintenance activities, which include minor new construction, operation and maintenance of facilities, firefighting, and real estate services. The engineer command will provide facilities engineering general and direct support to all elements of the theater army authorized such support (includes elements located in the communications zone and combat zones). Support will normally be provided on an area/major installation/major unit basis by facilities engineering groups and districts. The number of facilities engineering districts and groups will be determined by the density and distribution of the elements authorized this support.

a. Real Estate. Procurement of real estate in a theater of operations is in accordance with the laws of land warfare and with Department of Defense directives, as announced in policies by the theater commander. In Allied or friendly countries, international agreements or agreements between the theater commander and the country concerned may have provisions for procurement of real estate. Real estate acquisition and disposal is accomplished by elements of the facilities engineering districts and groups. Important factors to be considered in connection with real estate activities are—

(1) Requirements and allocations of areas and facilities must be planned well in advance.

(2) Commanders concerned are responsible for the selection of real estate sites under policies announced by higher headquarters. The engineer acts only as staff adviser, requestioning agent, and office of record in carrying out command and theater policies.

(3) Coordination is affected initially through CMO staff and CA units.

b. Firefighting.

(1) Firefighting and fire prevention are the responsibility of all commanders. Engineer firefighting teams provide engineer firefighting service support to the Army as required. These units are available only at centers of military activity, such as large hospitals, depots, petroleum terminals, and tank farms. In other areas, troop units fight fires, supplemented by civilian firefighters, when available. Firefighting equipment is organic to units engaged in hazardous duties, such as ordnance ammunition units and Army aviation units. Avoiding fire loss and damage requires frequent inspection, careful planning of new construction, and fire prevention discipline. The commander of each installation prescribes fire drills for all units and standing operating procedures for a fire alert.

(2) In the development of passive air defense and area damage control plans and procedures, the engineer is responsible for submitting recommendations for firefighting and control of large disastrous fires, as well as submitting fire control training programs and the technical supervision of such training.

c. Maintenance and Utilities. Maintenance of facilities and the provision of utilities will be accomplished by engineer utilities detachments which are in effect facilities engineer units. Representative tasks to be performed by these units are: operation and maintenance of existing utilities (e.g., heating, air conditioning, electrical, water, and sewage plants); maintenance of existing buildings, structures, and roads; limited modification of facilities; hire and supervision of civilian labor; and the purchase of local materiel to support facilities engineering programs.

13-12. Quartering

Quartering is the provision and administration of shelter for a command, including its personnel, headquarters, establishments, and supplies. Administration of shelter is the responsibility of the commander having territorial jurisdiction in the area. Administration includes allotment of quartering areas and existing facilities to using commands, and the establishment of regulations governing the use of quartering areas. Shelter may take the form of bivouac, improvised cover, or shelter tents; camps, where troops are under heavy tentage; cantonment, where troops are in temporary structures; and billets, where private or public buildings are occupied. In hostile territory, quartering is as authorized by the theater commander. Governing factors in the type of shelter provided and the location of quarters include the mission of the unit; policies of the theater commander; availability of areas and shelter, dispersion, security, sanitation, training, and other facilities; and comfort of the troops. Requisites for quartering areas include adequate routes of communications to and within the area; protection against the elements; adequate supply of water; good natural drainage; firm, dry soil; and freedom from sources of disease.

13-13. Camouflage

The basic principles of camouflage are followed in an offensive operation as well as in a static or defensive situation. The responsibility for camouflage rests on the commander, and all troops must be aware of the principles and techniques of camouflage. Technical advice and assistance is provided by the engineers. In a fast moving offensive situation it is doubtful if time will allow extensive artificial camouflage measures. However, engineers advise and assist other troops in the utilization of natural features which will aid in camouflage and concealment. During preparation for offensive operations, special attention is given to camouflage, concealment, and disguise of units and activities which may reveal friendly plans (FM 5-20). Camouflage is an important supporting element of tactical cover and deception (FM 31-40).

13-14. Crime Laboratory

Laboratory services in support of criminal investigation operations throughout the theater, including interservice responsibilities, are provided by a crime laboratory assigned directly to theater army. Under the control of the theater army provost marshal, the services provided by this unit include chemical analysis, firearms identification, and document and fingerprint examination.

Section IV. SERVICE ORGANIZATIONS

13-15. Cellular Team Units

A cellular team unit is a unit composed of separate teams (TOE cells), each of which includes personnel and equipment for the performance of a specific function. One or more teams may form a military unit to meet a special requirement not provided for in fixed TOE. Teams may augment units organized under fixed TOE when increments of less than company size are required.

13-16. Station Services

Station services are housekeeping and administrative activities required to maintain and operate the physical facilities of an installation and to provide supplies and services for assigned and attached personnel. Some or all of the installation services may be organized into composite units subordinate to the area support groups in the TAACOM. The various types of services involved are under the staff supervision of the ACofS, installations, and the ACofS, services, of the area support group headquarters.

13-17. Pooling of Services

A pool combines the resources of several organizations under central control for common use. Pools may be formed for vehicles; materials handling equipment; labor; or special types of services, such as construction or maintenance. Pooling of personnel and equipment has the advantage of providing the means for more efficient distribution of the workload and flexibility in meeting peak demands. Disadvantages of pools are the lowering of morale and reduced administrative control because of the separation of troops and equipment from their parent organizations.

13-18. Vehicle Pools

When there is an urgent requirement for additional cargo transportation, some of the cargo vehicles of several units may be pooled to accomplish the task. Organizing such a pool necessarily reduces the capabilities of the unit from which vehicles are drawn. The principle of pooling vehicles is not limited to any branch or any type of transportation. All vehicles of any unit are a source of transportation except Geneva Convention-protected vehicles; motor vehicles issued to move weapons; motor maintenance vehicles; and command, communication, and fire direction vehicles. Transportation truck units form the nucleus of vehicle pools. Truck companies may operate independently, be attached to installations, be placed under the control of battalion or group headquarters, or operate under the transportation officer.

PART THREE

PERSONNEL

CHAPTER 14

PERSONNEL—GENERAL

Section I. INTRODUCTION

14-1. General

The personnel and manpower functions of combat service support encompass personnel requirements, authorizations, and strengths. These functions also encompass replacements, personnel services, and other personnel activities.

14-2. Staff Responsibilities and the Personnel Command

a. Staff responsibilities and activities pertaining to personnel are discussed in FM 101-5. Reference data on personnel activities are contained in FM 101-10-1.

b. The PERSCOM, with its personnel and administration center (PAC), provides coordination with CONUS and control and management of theater army personnel and administrative services based on DA, theater, and theater army policies and directions.

c. Details on the organization and operation of the personnel command are contained in FM 29-6.

Section II. MANPOWER MANAGEMENT

14-3. General

Manpower management involves the planning and programing of military and civilian manpower strengths in consonance with—

a. Manpower requirements.

b. Strength and budgetary limitations.

c. Criteria for procurement and allocation of manpower.

d. Criteria for use of manpower.

14-4. Objective

The objective of manpower management is to maintain both maximum combat effectiveness within available manpower resources and the optimum ratio among combat, combat support, and combat service support forces.

14-5. Principles

a. Manpower management seeks to insure accomplishment of assigned missions with a minimum of manpower.

b. Continual evaluation of missions insures the most efficient use of personnel resources.

c. Manpower management continually evaluates functions and assigns priorities for allocation of available manpower resources.

d. Bases for the determination of manpower requirements are missions, functions, standards of performance for mission and function accomplishment, and workloads.

e. Commanders have maximum flexibility in use of manpower resources.

f. DA Pams 5-2 and 5-2-1 contain detailed information on management practices in TOE units.

14-6. Control and Troop Planning

a. Control of manpower management is through the mediums of manning documents, such as TOE, TDA, and manpower allocation vouchers, and officer manning levels.

b. Troop planning is discussed in chapter 4.

Section III. PERSONNEL MANAGEMENT

14-7. General

a. Military personnel management is the process of planning, organizing, coordinating, and controling the procurement, training/education, utilization, separation/retirement, development, and motivation of military personnel to assist in the successful accomplishment of the organizational mission. It includes all procedures related to military job analysis and evaluation; position classification, assignment, and utilization; maintenance of an adequate system of records and reports required for successful operation of the Army personnel system; development of individual potential; and development of an organizational climate that enhances the attitude motivation, commitment, and sense of wellbeing of soldiers and their families.

b. The responsibilities of the personnel officer, relative to personnel management, are discussed in FM 101-5.

14-8. Classification

a. Personnel classification and position classification are means of systematically assigning personnel to positions for which they are qualified.

b. Personnel classification is the continuing process of identifying, recording, and evaluating the individual's mental and physical abilities, occupational qualifications, occupational record, interests, education, and military and civilian experience to enable assignment to positions best benefiting the Army.

c. Position classification is the process of identifying, codifying, and describing job content and qualification requirements of duty positions. The military occupational specialty (MOS) is the primary tool in position classification. The basis for MOS job content is job analysis. The MOS structure provides a standard description of Army jobs.

14-9. Assignment

a. Assignment is the procedure by which an individual is placed in an organization and given a specific military duty. Personnel classification, position classification, and the needs of the service are the normal bases for assignment. Needs of the service, however, are the primary consideration and, in most cases, the final determining factors in assignment of personnel.

b. Assignment is part of personnel management and is directly related to the following Army personnel management principles:

(1) Balance the best interests of the individual with the best interests of the Army.

(2) Increase the individual's ability to perform through training.

(3) Use the individual on essential tasks.

(4) Stimulate the individual's desire to perform.

(5) Assure the individual of professional development.

c. Assignment objectives are—

(1) Consideration of the organizational mission.

(2) Equitable distribution of personnel according to mental qualifications.

(3) Equitable distribution of physical capabilities.

(4) Equitable distribution of skills.

(5) Assignment according to interest and aptitude.

Section IV. CIVILIAN PERSONNEL

14-10. General

Authority for civilian personnel management is defined in AR 10-5. Delegation of this authority is through command channels to the lowest practicable operating level.

a. United States Citizens. Employment conditions of US civilians will be in accordance with US Statutes, Executive Orders, and US Civil Service Commission Regulations implemented by DOD and DA, or nonappropriated fund equivalent regulations.

b. Non-United States Citizens in Foreign Areas. Employment conditions of local and third country civilians directly or indirectly employed by US forces and US Government or US Government-invited contractors in foreign areas must be in compliance with international law, treaties, and agreements; and with applicable US and local laws to the extent that, treaties and agreements do not provide otherwise. United States supervisory personnel should be familiar with the customs, work habits, and language of local personnel. The provisions of an agreement with the host government normally govern the conditions of employment of non-US citizens in friendly countries. These employment conditions are in accordance with local law and practice to the extent compatible with the basic management needs of the forces. In peacetime the Department of Defense prescribes broad policies which are transmitted to the unified or specified

commander by the military department responsible for the support of the unified or specified command headquarters.

14-11. Administration Under Peacetime Conditions

Under peacetime conditions, both in the United States and in foreign areas, area or installation civilian personnel offices conduct administration of civilian personnel, both US citizens and non-US citizens. Civilian personnel officers supervise the civilian personnel program under general staff supervision of the ACofS, personnel (FM 101-5).

14-12. Administration Under Emergency Conditions

Army CPR 900 (C1) contains the basic policies and procedures for the utilization and administration of US citizens under emergency conditions. In DA Pam 690-80, guidelines are provided for the administration of non-US citizens during hostilities.

a. United States Citizens. In the United States, installation civilian personnel officers conduct civilian personnel administration. In oversea areas, ACofS personnel staff officers have this responsibility.

b. Non-United States Citizens in Foreign Areas.

(1) *Responsibilities.*

(*a*) *Area commanders.* Designated commanders exercising area responsibility (i.e. TAACOM and corps commanders) implement policies of the theater, theater army, or task force commander concerning the procurement and administration of local civilian personnel. Such policies are normally promulgated by the PERSCOM.

(*b*) *Commanders of using units.* Commanders of all units authorized to use local civilian personnel appoint appropriate officers to administer these personnel. In the absence of other arrangements for making payments, these officers are class A agents for handling civilian payrolls.

(*c*) *Funds.* Finance disbursing officers furnish class A agent officers the necessary local funds.

(2) *Methods of employment.* The commander having general area responsibility determines the method of employment of non-US local civilian personnel. He bases his determination on—

(*a*) Needs of the forces and circumstances in the area.

(*b*) Existing agreements, including civil affairs.

(*c*) United States foreign policy considerations.

(*d*) Capabilities of the local government.

(*e*) Appropriateness of local employment practices.

(3) *Utilization of employees.* Non-US civilian personnel may be direct-hire employees of the US Government, or personnel employed by—

(*a*) A friendly government and furnished to the US forces on a reimbursable basis.

(*b*) Local government agencies in an occupied enemy or former enemy area and requisitioned from these agencies.

(4) *Administration and conditions of employment.*

(*a*) Each unit using civilian labor may administer the personnel through an officer designated by the unit commander. Temporarily employed personnel should receive a standard hourly pay rate regardless of type of work performed or skill required. Personnel in supervisory positions should receive an additional pay increment.

(*b*) When conditions permit, administration of civilian personnel may be transferred to civilian personnel officers deployed under an area headquarters operating in conjunction with civil affairs units in the area. The area headquarters will maintain or reestablish standardized hours of work, tours of duty, allowances, differentials, premium pay for overtime, and other essential program elements.

(*c*) Where conditions require the use of civilian labor able to move from place to place as needed, such personnel may be formed into organized units and administered under regulations approved by the theater, theater army, or task force commander. Mobile labor units and personnel thereof are regulated by the Geneva Conventions in areas where the Conventions apply. Particular reference should be made to provisions concerning types of work and organization, such as Article 51 of the Geneva Civilian Convention which is intended to maintain the type of work performed as essentially civilian (FM 27-10).

(*d*) The conditions of employment for non-US civilians brought into the area across international boundaries for employment by US forces must be in accordance with international law and prior agreements with the friendly governments concerned. All non-US nationals residing in the area, as well as refugees and stateless persons, work under the same conditions as local nationals, unless applicable legislation or international agreements provide otherwise.

(*e*) Payment to civilian labor may be by one of two methods, depending on whether or not the activity is in a friendly country or in an occupied area.

1. Direct payment. Using units appoint a class A agent officer to pay each individual worker on the basis of payrolls prepared by the using unit and in accordance with applicable wage rates

prescribed for the area of employment. Certified payrolls are submitted to the servicing finance disbursing office for computation and preparation of funds for class A agent officers.

2. *Indirect payment.* Using units prepare and furnish to the appropriate civil affairs unit, through the area labor office, a certified payroll showing the individuals employed, the hours worked, and the job classification of the individual. The host country, or a subordinate government agency of the host country, pays the individual. Reimbursement, if required by agreements, will be, preferably, at the government level.

(5) *Logistic support.* Local civilian personnel who live in their own homes and report daily to an established worksite (static labor), as well as mobile labor, receive the necessary logistic support for their protection and for accomplishment of the labor mission (DA Pam 690-80).

(*a*) Static labor receives emergency medical treatment and, when authorized by the commander exercising area responsibility, may receive one meal (one-third ration) per day. Rations for civilian labor are captured enemy stocks, if available, locally procured supplies, or modified US Army rations, in that order of priority.

(*b*) The commander exercising area responsibility may authorize additional support (i.e., protective masks and class X clothing) for both static and mobile labor.

(*c*) The headquarters exercising area responsibility may prescribe the extent to which the cost of logistic support will be deducted from the pay of workers or furnished without charge, consistent with operating labor practices, and civil affairs considerations in the area. Before issuance of such instructions, cost of individual rations normally is deducted from the pay of workers in an amount for each meal (one-third ration) not exceeding the normal cost of a comparable meal in the civilian economy.

(*d*) Contractors (and their authorized employees) may be entitled to logistic support by the supported force in accordance with the terms of the contract. Commanders exercising area responsibilities will coordinate with the responsible contracting officer to ascertain what support must be provided.

(6) *Security screening.* Units using local non-US civilian personnel normally coordinate with local military intelligence units for the screening of these personnel.

Section V. SAFETY MANAGEMENT

14-13. Objective

The objective of safety management is to conserve personnel and hardware from accidental loss so that maximum resources contribute to mission accomplishment. The integration of safe practices and standards into all activities is a continuing process.

14-14. Command Responsibility

The responsibility for effectiveness of safety management rests with the commander at each level. While safety requirements may require modification, safe practices and principles applied in training will lessen the probability of unnecessary losses of materiel and manpower during combat operations. Commanders must insure that directives, standing operating procedures, and training doctrine specify safe practices and safe physical standards, and that such practices and standards are observed.

14-15. Staff Responsibility

The personnel officer has primary general staff responsibility for supervision of Army safety activities. He coordinates safety management matters with other general and special staff officers as follows:

a. Operations officer on integration of safe practices into training and operational activities.

b. Logistics officer on safety matters related to combat service support activities.

c. Provost marshal on traffic controls for safety.

d. Chaplain on moral responsibilities for safety.

e. Surgeon on occupational health, ionizing radiation, and accident trends in units and individuals.

f. Engineer on construction safety, fire prevention, and protection.

14-16. Integration

Effective integration of safety management throughout the command requires incorporation and enforcement of safety standards and procedures in operations. It also requires—

a. Corrective action to eliminate or control hazards, conditions, or practices that cause accidents.

b. Guidance at all echelons on matters pertaining to safety management.

c. Effective safety education.

d. Appropriate safety training of military and civilian personnel.

e. Adequate accident investigation and reporting.

f. Evaluation and effective use of accident data.

g. Command and staff supervision of the safety program.

CHAPTER 15

PERSONNEL SERVICES

15-1. General

Personnel services are combat service support activities pertaining to personnel as individuals. The immediate objective of personnel services is to assist the commander in attaining and maintaining good morale in a command. Personnel services include those functions that are primarily the staff responsibility of the ACofS, G1, personnel.

15-2. Recreation Services

The objective of recreation services is to increase the effectiveness of the Army through a planned off-duty program of sports, recreation, and library activities. The primary purpose of recreation services is to contribute to the mental and physical well-being of the individual. In CONUS, public facilities augment the activities of recreation services. In oversea areas, expansion of recreation services activities compensates for the lack of public facilities. Recreation services activities are a function of the personnel command (PERSCOM); the personnel and administration battalion, COSCOM; and the AG Co, DISCOM. Detailed information on recreation services operations is provided in FM 12-2.

15-3. Rests and Leaves

a. The authority for granting rests and leaves is contained in AR 630-5 and theater army policies.

b. Passes are periods of free time, limited to 4 days (96 hours), that are not chargeable against accrued leave. Temporary duty (TDY) for rest and recuperation (R&R) is designed to rehabilitate the individual mentally and physically and is chargeable to leave.

c. Quotas for leave, pass, and TDY for R&R may vary among theaters and even among units. The purpose of a quota system is to insure priority to troops having the greatest need for R&R. Quotas in the theater depend on capacity of leave and recreation centers and areas (FM 12-2), transportation, travel time, and duration of stay authorized at different facilities.

d. Rest areas and rest camps are normally for use by unit size groups from squad up to and including battalion. Leave and recreation centers and leave areas are for use by individuals. Units using rest areas provide their personal bedding, tents, and rations; and furnish supervisory personnel for control purposes.

15-4. Rest Areas

a. When combat operations permit, divisions and separate combat brigades establish some type of rest area in their operational areas. Separate or divisional brigades may establish a "waterhole" type of rest or recreational camp near the bath and clothing exchange elements. A recreation services team of the corps support command operates the rest area. Equipment and supplies for self-help sports, games, and projects are available in minimal quantities. The division rest area provides facilities for no more than 750 personnel at any one time, while the separate brigade rest area provides facilities for not more than 250.

b. Recreation services teams, operating under the control of the COSCOM personnel and administration battalion commander, establish rest areas in the corps area. The P&A battalion will be augmented to the extent required to provide sufficient rest areas sites to accomodate the troop strength. The rest areas will be located in close proximity to the bath and clothing exchange elements. Medical, dental, finance, mess, postal, chaplain, engineer, exchange, bath, legal services, and clothing exchange activities provide additional support to rest areas in the combat zone, usually through the use of teams.

c. Recreation services teams, operating under the control of the area support group commander, establish rest areas in the COMMZ. The TAACOM provides supply, maintenance, legal, military police, finance, chaplain, and exchange services to these rest areas while the MEDCOM provides medical support.

15-5. Leave and Recreation Centers

Cellular teams of the recreation services organization, PERSCOM, establish and operate leave and recreation centers in the COMMZ. Each center is capable of supporting 200 troops. A recreation services detachment of the recreation services organization provides command, control, and supervision of each center's activities. The area support group commander of the area in which a center is established provides support services for the center. Medical centers also have leave and recreation centers. All leave and recreation centers provide bedding, billets, and food service. For lay

personnel who desire chaplain activities, a retreat center is available in the overall center complex.

15-6. Rotation

a. The purpose of rotation is to conserve manpower, increase efficiency, and improve the morale of the theater forces. Exchanging new replacements for veteran soldiers prior to the time that the latter become physically or mentally exhausted achieves the purpose of rotation.

b. The rotation plan consists of rotation within a theater or rotation between theaters and the CONUS (oversea tour). The length of a normal oversea tour is subject to review when hostilities commence. When the length of an oversea tour is prescribed or is subject to a point system, the infusion of individual replacements into units in the theater of operations can preserve unit integrity. This process precludes mass exodus of personnel from the units by staggering individual rotation dates.

c. Theater commanders determine the criteria for intratheater rotation eligibility. Individuals with the greatest combat exposure receive priority. Emphasis is on retraining, reassigning, and transferring personnel between forward and rear areas. When rotation between oversea theaters and the CONUS is authorized, theater commanders establish the standards for implementation, based on availability of replacements. In the absence of a theater army intratheater rotation program, the corps may implement its own program.

15-7. Decorations and Awards

a. References. Details on the purpose, authority, and standards relative to decorations and awards are contained in AR 672-5-1.

b. General. The awarding of decorations recognizes extraordinary, unusual, or outstanding acts of heroism and meritorious achievement or service. Decorations are visible and tangible public evidence of such acts or services. When promptly and judiciously awarded, with appropriate ceremony, they become incentives to greater effort and are instrumental in building and maintaining morale.

c. Award of Decorations.

(1) During wartime, authority to award decorations is delegated to commanders in the field. This insures prompt recognition of heroism, meritorious achievement, and meritorious service. A complete understanding of the established standards for each decoration and close conformance to these standards is imperative. Deviation from established standards gives rise to complaints of inequity and tends to lower the overall value of decorations.

(2) Theater army commanders establish and maintain a uniform decorations and awards policy. This policy provides for judicious interpretation of requirements, appropriate delegation of authority, efficient processing, decorous presentation, and adequate publicity. Implementation of the policy is through the use of awards boards (if desired), precombat instruction, frequent comparisons of accomplishments, observation, and administrative reports.

(3) Commanders of units, to include divisions or lower units, establish awards policies to insure effectiveness of the awards system. To obtain uniformity throughout the theater, subordinate commanders base their policies on those of the next higher echelon. Normally, each commander retains authority to make certain specific awards.

(4) Recommendations for individual awards go through command channels. Each commander through whom the recommendation passes indicates his approval or disapproval. In event of disapproval, he cites specific reasons and includes a comment with regard to consideration for lesser awards appropriate to the act. Except when specifically authorized by Army regulations, recommendations do not return to the originator until they have been acted on by the commander having authority to make the award. Return of recommendations to the originator for administrative reasons is avoided.

(5) Commanders having authority to award decorations may appoint boards of officers to consider recommendations for awards and make appropriate recommendations. The board should consist primarily of unit commanders, but staff representatives with intimate knowledge of the policy and standards pertaining to decorations also should be on the board.

d. Civilian Awards. Civilians may receive recognition for meritorious achievements and services to the Army by the award of certain decorations during time of war. The general standards required to merit such awards are comparable to those required of military personnel. (See AR 672-5-1 for specific guidance.)

e. Foreign Awards to United States Personnel. Under constitutional restrictions, no person holding any office of profit or trust under the United States shall, without the consent of the Congress, accept any decorations, awards, or gifts tendered by any official of a foreign government. Under US laws a person may receive a gift or decoration tendered by a foreign government, subject to approval of Department of the Army and with the concurrence of the Secretary of State (AR 672-5-1).

f. Awards to Foreign Personnel. As a means of fostering good will and cooperation, meritorious achievements and services by military and civilian personnel of friendly nations who have materially

assisted the United States in the prosecution of war against the enemy may be recognized by the award of certain decorations. The standards prescribed by Army regulations apply equally to personnel of foreign nations and to U.S. military personnel.

15-8. Postal Service

a. Each service administers its own military postal service to support its particular requirements under the terms of the postal agreement between the Department of Defense and the United States Postal Service.

b. The US Army Postal Service Agency, on behalf of The Adjutant General, is responsible for supervising and coordinating all activities and field operations of the Army Postal Service. Execution of policy and procedures for postal service within the Army is a command responsibility at all levels.

c. For details on Army postal operations in theaters of operations, see FM12-2 and FM 29-6.

15-9. Personal Affairs

Proper arrangement of an individual's personal affairs contributes materially to his military effectiveness. Information pertaining to personal affairs in contained in DA Pam 608-2.

15-10. Nonappropriated Fund Activities (AR 230-1)

a. Nonappropriated Fund activities are funds, associations, clubs, messes, or similar organizations operated and maintained from nonappropriated funds. There are three major categories of nonappropriated fund activities. Each has distinctive characteristics as to source of income. nature of operation, and mission for which established.

(1) Revenue-producing activities are financially self-sustaining operations established to sell good and services to military personnel and certain civilian personnel, and to provide financial support for welfare funds. Exchange services and motion-picture theaters are examples of revenue-producing fund activities.

(2) Welfare fund activities consist of nonappropriated funds established to supplement appropriated funds in providing a well-rounded morale, welfare, and recreation program. Income is primarily from revenue-producing activities. Expenditures may be for recreational-type articles and services in support of programs designed to benefit authorized participants without charge, or with nominal charge when available resources are inadequate. Examples of welfare funds are major command welfare funds, central post funds, and unit funds.

(3) Sundry fund activities are financially self-sustaining operations established to provide certain essential services to specific categories of personnel. Individual benefits, on a membership basis, are from participation in, or patronage of, the programs available. Examples of sundry fund activities are officer and noncommissioned officer open messes.

b. Nonappropriated fund activities are government instrumentalities and, as such, are entitled to all attendant immunities and privileges. Officers or civilian employees of the US Government, acting within the scope of their official capacity, establish and supervise these activities as a command function.

c. The services provided by nonappropriated fund activities have an important bearing on morale and welfare. Operation of these activities is under the general staff guidance and supervision of the G1.

15-11. Army and Air Force Exchange Service

The mission of the Army and Air Force Exchange Service is to supply military personnel and other authorized persons with articles of necessity and convenience not provided by government issue and to gain profits for distribution to welfare activities not provided for by appropriated funds. In a theater actively engaged in combat operations, the articles for resale usually consists of toilet articles, candy, tobacco products, soft drinks, beer, souvenirs, and other items that add to the comfort of the individual. In the CONUS, in an occupied zone, and in other oversea areas, the list of items provided for resale is more extensive and varied. The mission is accomplished through establishment of permanent exchanges and exchange branches. Under field conditions—particularly in combat zones—when exchange operations are impractical, the theater army commander authorizes certain essential items for issue as part of the field ration.

15-12. Chaplain

a. The chaplain is the adviser to the commander in all matters of religion and morals to include moral and ethical dimensions of leadership, and morale as affected by religion within the command. He is available as a consultant on matters of the religions and cultures indigenous to the assigned areas of operations in relation to their effect upon the mission of the unit. He exercises, for the commander, responsibility for—

(1) Religious services and ministrations.

(2) Religious education of military personnel, their dependents, and authorized civilians.

(3) Pastoral care and counseling.

(4) Human self development.

(5) Liaison with religious leaders in the civilian community.

(6) Religious administration.

b. The chaplian is a representative of his denomination in the Army. As such, he is respon-

sible to his denomination for compliance with ecclesiastical requirements.

c. The military duties of the chaplain, as prescribed by Federal law, are analogous to those performed by clergymen in civilian life, modified by distinctive conditions attached to military life. Each chaplain, as far as practicable, serves the religious and moral needs of the personnel of the command to which he is assigned. Within the limits of laws, regulations, and orders, he enlists the active aid and cooperation of military and civilian personel, both lay and clerical, as the needs of the command may require or as the commander may direct. He has training responsibilities in connection with the human self-development program (AR 600-30).

d. A chaplain is not assigned duties other than those pertaining to his profession as a clergyman, except in an extreme military emergency. When such an emergency makes it necessary for a chaplain to perform secular duties, he cannot be assigned any duty imcompatible with his status as a noncombatant under the terms of the Geneva Conventions. He does not, and will not be required to, bear arms. He is not available for detail as an exchange, athletic, recreation, graves registration, welfare, morale, information, education, personal affairs, or recreational services officer. He is not used for duty as trail counsel of courts-martial or as investigating officer, defense counsel, law officer, or member of the court.

e. Details on the responsibilities and functions of the chaplain are contained in AR 165-20 and FM 16-5.

15-13. Welfare Service

There are three major organizations dedicated to providing assistance to military personnel and their dependents. The American Red Cross, in accordance with its Federal charter, conducts a broad program of social welfare services for members of the Armed Forces and their dependents in theaters of operations. The Army Emergency Relief extends financial aid to personnel of the US Army and their dependents. The Army Relief Society is an organization founded specifically to assist needy widows and orphans of Regular Army personnel. These agencies, combined with organic means, provide welfare services in the theater.

15-14. Legal Assistance

The staff judge advocate, as part of the preventive law program, provides legal assistance to eligible personnel in theaters of operations. This service includes advice, drafting of documents, and referal of legal matters, in appropriate cases, to civilian counsel of the individual's choice. The usual attorney-client relationship exists, and the information and files of individual cases are confidential and privileged.

15-15. Army Claims Program

The Army claims program enables the commander to protect the interests of the United States. As part of the preventive law program, it has a profound impact on the morale of military personnel in a theater of operations. The prompt adjudication and payment by the Army of valid claims for loses sustained by military personnel incident to their service and of claims arising from the acts of military personnel in the performance of their duties are important in maintaining a high standard of morale. By prompt and adequate payment of just claims, the claims program provides additional assurance to the commander that he will have favorable public relations in his area of command, and favorable relationships with the host government.

15-16. Finance Service

Acting under the staff supervision of the ACofS, comptroller (or the G1, when no comptroller is authorized). Finance corps elements are responsible for planning the finance support of the command, to include procurement and deployment of finance units. When forces are deployed overseas, the ACofS, comptroller, promptly initiates the development and distribution of plans for emergency currency controls that may become necessary in the future. A detailed description of the finance service mission, organization, and functions is contained in FM 14-3.

CHAPTER 16

PERSONNEL REPLACEMENTS

16-1. General

a. Personnel replacement functions include procurement, reception, classification, distribution, training, and assignment of individual and unit replacements to and within theaters of operations.

b. Training of individual and unit replacements is accomplished base on the known and projected requirements for the Army in the field. Any retaining that may be required in the theater results from command evaluation of the individuals or units concerned and takes the form and normal command training or on-the-job training.

c. There are two types of personnel replacements, as follows:

(1) *Individial replacement*—an individual assigned or destined for assignment to fill a vacancy in an organization.

(2) *Unit replacement*—TOE unit assigned or destined for assignment to fill a vacancy in an organization. Unit replacements may range from cells (TOE 500- and 600-series) up to and including battalion.

d. In FM 12-2, the automated system for assignment of replacements is described in detail; and the mission, organization, and functions of replacement operating units are discussed.

e. Figures 16-1 and 16-2 illustrate schematically the flow of individual and unit replacements between the CONUS and a theater of operations, and within the theater of operations.

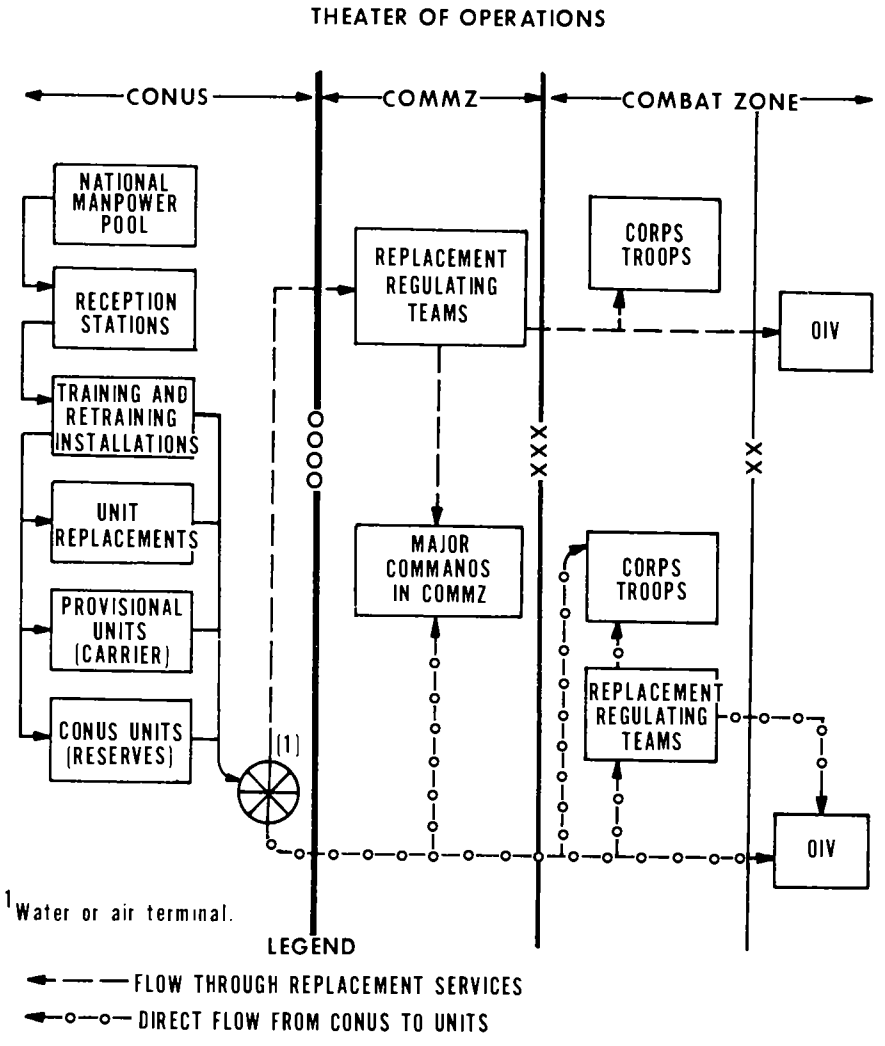


Figure 16-1. General flow of individual, packet, and unit replacements (schematic).

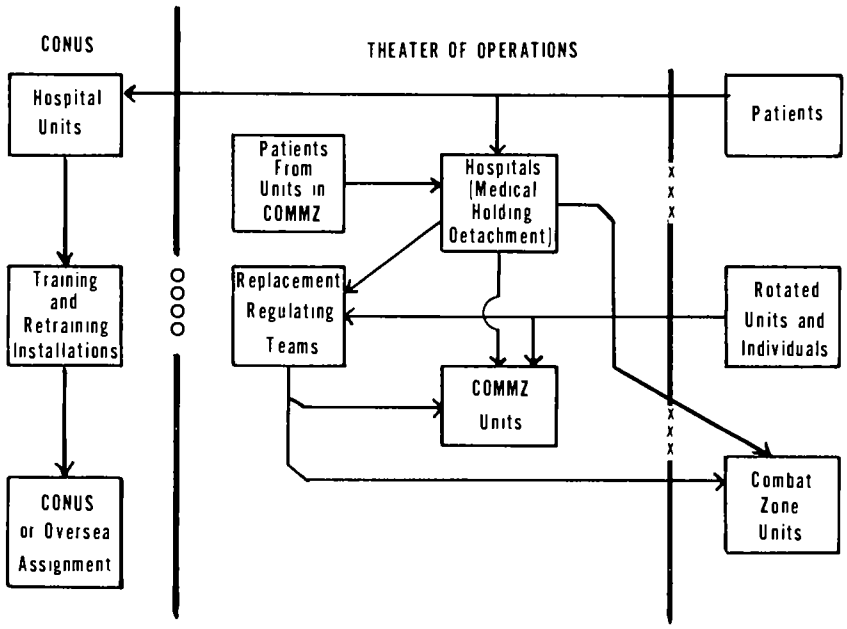


Figure 16-2. General flow of hospital returnees and rotated units and individuals (schematic).

16-2. System Relationships

The theater army automated system for assignment of replacements ties in with the CONUS system through the vertical personnel and administrative system that extends from the unit in theater army through the Department of the Army. The theater army replacement system reports requirements by status and strength, based on individual status changes received from automatic data processing elements of supported activities in theater army. Requirements for unit replacements also include the compositioon of the unit being replaced. This replacement system must coordinate with the systems of the transportation command, the theater army area command, and the COSCOM to insure timely and adequate intratheater transportation of replacements and issue of appropriate clothing and equipment to replacements as required.

16-3. Operational Concepts

a. The personnel and administration center (PAC) of the personnel command (PERSCOM) maintains the field administrative personnel record file on all theater army personnel. Using automatic data processing techniques, the PAC requisitions, assigns, and operationally controls individual and unit replacements, including personnnel in the theater being returned to duty status. The replacement element of the PAC performs centralized reclassification and reassignment actions for personnel being returned to a duty status.

b. Replacement regulating detachments assigned to the PERSCOM and COXCOM personnel and administration battalion receive replacements from the CONUS and from within theater army, provide them mess and billets, and stage unit replacements.

c. The replacement element of the PAC notifies replacement-regulating detachments when to expect arrival of incoming shipment of replacements and keeps commanders informed of replacement allocations made to their units. The regulating detachments, in *turn,* report daily to the PAC concerning replacements received, those in transit, those awaiting onward transportation, and nonarrivals.

d. The theater army replacement level is reduced to a minimum, based on immediate requirements. However, levels may be increased by a short range lead to sustain planned major tactical operations when the transportation capability cannot support the planned replacement movement required.

e. Staging areas provide accommodations for troop units and transient personnel between movements over the lines of communication. Staging areas are usually within easy marching distance of terminals, transfer points, airfields, or highways over which troop movements are planned.

The location selected for a staging area should afford protection against attack by mass-destruction weapons. Facilities may vary from simple bivouac areas to establishments with covered shelter, mess, supply, and medical support. Staging areas must accommodate both personnel and their equipment. Often, they must also make provision for reuniting troops with their equipment, when it has been shipped previously, or for issuing equipment that is provided separately. Movement through staging areas must be expedited. The PERSCOM establishes the staging areas operated for both individual and unit replacements.

16-4. Requisitioning

a. Theater army headquarters submits projections of personnel requirements to the Department of the Army, reflecting requirements from sources outside the theater by MOS and grade. The Department of the Army uses the submitted estimates for—

(1) Planning input into the training base to meet projected requirements.

(2) Planning input into advanced individual training and technical training.

(3) Allocating personnel, alerting CONUS installations of forthcoming requirements, and estimating transportation requirements.

b. Direct support personnel units send daily to the PAC replacement element, files containing identification of supported units and information on existing and projected vacancies. These personnel units prepare the vacancy files from information contained in the command record file and use them to request individual and unit replacements. The replacement element of the PAC assigns replacements daily to fill these requirements, subject to priorities established by theater army headquarters.

CHAPTER 17

ARMY MEDICAL SUPPORT

(STANAG 2061, 2087; SEASTAG 2061, 2087; SOLOG 66)

Section I. INTRODUCTION

17-1. General

a. As a member of the DA special staff, The Surgeon General is responsible for development, policy direction, organization, and overall management of an integrated Army-wide health services system. He has Army staff responsibility for—

(1) Planning, developing, programing, directing, and supervising health services for the Army and for other agencies and organizations.

(2) Establishing health standards applicable to personnel of the Army.

(3) Health professional education and training for the Army.

(4) Medical research, development, test and evaluation for the Army and coordination of the Army-wide program in the biological sciences.

(5) Information systems in support of assigned functional areas of responsibilities.

(6) Direction, evaluation, and coordination of medical materiel and maintenance programs including life cycle materiel management.

(7) Technical review and evaluation of nonmedical materiel to determine possible existence of health hazards.

(8) Formulating policies and regulations concerning the health aspects of Army environmental problems.

(9) Direction, evaluation, and coordination of worldwide command programs to protect and enhance health by control of environment and prevention of disease.

b. Medical supply and the maintenance of medical supplies and equipment is a subfunction of the medical materiel program, and the overall health care system. While operating under the basic DA policies, the Surgeon General is responsible for establishing and implementing appropriate policies and procedures. The surgeon at each echelon of command is responsible for the implementation, coordination, and direction of DA medical materiel programs (AR 40-61). In this connection, the management of medical materiel will not be included with the management of other commodities without approval of TSG. Paragraph 2-10, AR 11-8, addresses the logistic responsibilities of TSG.

c. For a detailed description of medical support in a theater of operations see FM 8-10 and FM 8-15.

17-2. Medical Resources

a. Manpower is one of the ultimate keys to success on the battlefield, and conservation of manpower is the driving force behind the health services effort. Manpower conservation is accomplished by utilizing a totally integrated health services system to achieve maximum medical effectiveness. This system includes preventive medicine, evacuation, hospitalization, veterinary, and dental support, and the prompt supply of medical equipment and materiel in the quantities required for the forces supported.

b. General supervision of the total health services effort employs the six principles of field medical support: continuity, control, proximity, flexibility, mobility, and conformity, Each principle is discussed in paragraphs 17-3 through 17-8 below.

Section II. PRINCIPLES OF FIELD MEDICAL SUPPORT

17-3. Continuity

Medical support must be continuous. Treatment interruptions cause increased morbidity and mortality. Once begun, treatment terminates with a return to duty, discharge, or death. Optimum standardized procedures will assure the accomplishment of treatment (and other medical functions) appropriate to the means and situation at each level.

a. The hospitalization-evacuation system is based on lower organizational levels of health services being supported by the next higher levels. Each has

the responsibliity to evacuate patients only to the rearmost medical facility of its own organization level.

b. Patients are evacuated no further to the rear than warranted by their physical condition or the military situation. The Secretary of Defense establishes the maximum period of noneffectiveness that patients may be held for treatment within the theater. This is promulgated in the theater evacuation policy. Patients whose requirements will exceed this prescribed limit are evacuated.

c. Medical plans must be simple, particularly in the combat area. Facilities must not be immobilized by long and/or complicated treatment procedures. Injuries or illnesses which can be successfully treated with relatively simple surgery or available medicines, are treated in forward areas. This treatment is usually limited to emergency measures to preserve life and limb, to preclude undue suffering, and to prepare the patient for further evacuation.

17-4. Control

Control of medical resources must rest with the medical commander or medical staff officer.

a. If the medical support system is to respond to the commander's plans in a timely manner, the surgeon responsible for its direction must be kept informed of the operations of the medical units. To insure economic utilization and control, medical units are not attached to the supported units but remain under the surgeon.

b. The objective of military medicine is to conserve trained manpower; in some situations, medical means must be employed to do the most good for the greatest number. In emergencies, when a wide disparity exists between the requirements for medical support and the means available, it may become necessary to emphasize care for those patients who can be returned to immeditate duty, rather than those more seriously injured.

c. The treatment at each level of the medical support system must be commensurate with available resources. Medical resources are limited. It is essential, therefore, that control of medical resources be retained at the highest medical level consistent with the tactical situation.

17-5. Proximity

The medical means must be as close to combat operations as the time/distance factor and the tactical situation permit. Prompt collection, sorting, and evacuation of patients must be provided.

a. Reduced morbidity and mortality depend on the speed with which medical treatment can be initiated. In support of a tactical operation, the medical planner has two alternatives. He must move patients to a medical treatment facility, or move the medical facility to the patients. Two factors will govern the choice: the military situation and the patient's condition. The medical facility must not interfere with combat operations or be subjected to enemy interference; yet, its remoteness must not endanger the patient's recovery and survival because of delay enroute to the medical facility.

b. In forward areas, medical treatment facilities are positioned as far forward as possible prior to an attack, are moved to maintain contact with units they support, and are displaced to the rear prior to the start of any retrograde movement. In this manner, they can provide early rapid resuscitative care prior to evacuation of patients.

17-6. Flexibility

Medical support must be flexible. Altered tactical plans or operations may necessitate a redistribution/relocation of medical resources. The medical commander and staff must be positioned to permit shifting their resources to meet the changing requirements. While alternative plans and a medical reserve are essential, care must be exercised to avoid the establishment of excess medical troops and/or medical facilities.

17-7. Mobility

Supporting medical treatment units must maintain contact with units they support. Medical elements must have mobility comparable to that of the units they support.

a. A unit's mobility is measured by its ability to move its personnel and equipment with organic transportation.

b. When committed to patient care, medical units regain their mobility by prompt evacuation or transfer of patients. A medical unit's mobility is hampered by an accumulation of patients. When a unit has been unable to transfer patients, it may have to leave a small holding detachment with the accumulated patients to enable the main part of the unit to move.

17-8. Conformity

Comformity with the tactical plan is essential in the provision of field medical support. By an analysis of the commander's plan of operation, medical planners determine the medical requirements to provide adequate medical support at the right time and place.

Section III. ARMY MEDICAL SUPPORT ORGANIZATION

17-9. General

The field medical support organizations are structured to support the various tactical organizations in a theater of operations. The organizations that receive field medical support are found at unit, division, corps, and communications zone (COMMZ) levels. Levels of medical support extend rearward for forward operational areas in an integrated and continuous system to CONUS.

a. Unit Level. Unit level medical support includes preventive medicine activities, acquisition of the sick and wounded, emergency medical treatment (EMT), and evacuation from the point of illness or injury to initial treatment at the aid station. Unit level medical support is provided by medical elements assigned or attached to batalion or comparable units of the combat arms. Units without organic medical elements receive unit level medical support on an area basis from the nearest medical facility.

b. Division Level. Division level medical support primarily includes: evacuating patients from unit level aid stations; and, providing division level medical treatment and area medical support to nearby units without organic medical elements. This medical support is provided by the division medical battalion. Upon request, Army aeromedical evacuation will be provided by the corps medical brigade. Armored cavalry regiments receive division level medical support from assigned, attached, or nearby medical companies.

c. Corps Level. Corps level medical support provided by the corps medical brigade is not limited to but includes: evacuating patients from supported divisional and nondivisional units; providing resuscitative and/or definitive medical treatment; and providing area medical support within the corps area.

d. Communications Zone Level. Communications zone medical support provided by the medical command is not limited to but includes: surface evacuation of patients from the corps, area medical support in the COMMZ; and, resuscitative and/or definitive medical treatment at COMMZ hospitals. Air evacuation from the corps is a responsibility of the Air Force.

17-10. Area Medical Support

This concept involves the delineation of support responsibility by geographical area. It includes but is not limited to the provision of unit level medical support for organizations without an organic medical capability. Medical units for those purpose are allocated on the basis of troop strength and location. They are established and positioned when justified by requirements.

17-11. Capability

Within a theater of operations, the treatment capability of successively higher organizational levels a field medical support (unit, divisional, corps, and communications zone) includes the capabilities of all lower organizational levels.

Section IV. MEDICAL EVACUATION AND HOSPITALIZATION

17-12. General

a. Patient evacuation entails the acquisition of patients from the battlefield or other locations and their movement from one medical treatment facility to another. The term "evacuation system" includes successive agencies and installations engaged in collection, treatment, transportation, and hospitalization. This "system" of facilities includes and extends from the most forward aid station(s) to the rearmost installation, a general hospital. Each successive medical facility in the "system" from the forward combat area to the rear, usually is capable of providing more extensive or more intricate medical care. Figure 17-1 depicts the patient evacuation flow within the theater of operations.

b. Patient evacuation is difficult even under the most favorable conditions. It must be done against a constant forward movement of troops and supplies, and interference with this forward movement must be minimized. Most patients are picked up as individuals in or from the forward combat zone and require individual care and treatment through all successive stages of the evacuation and hospitalization system.

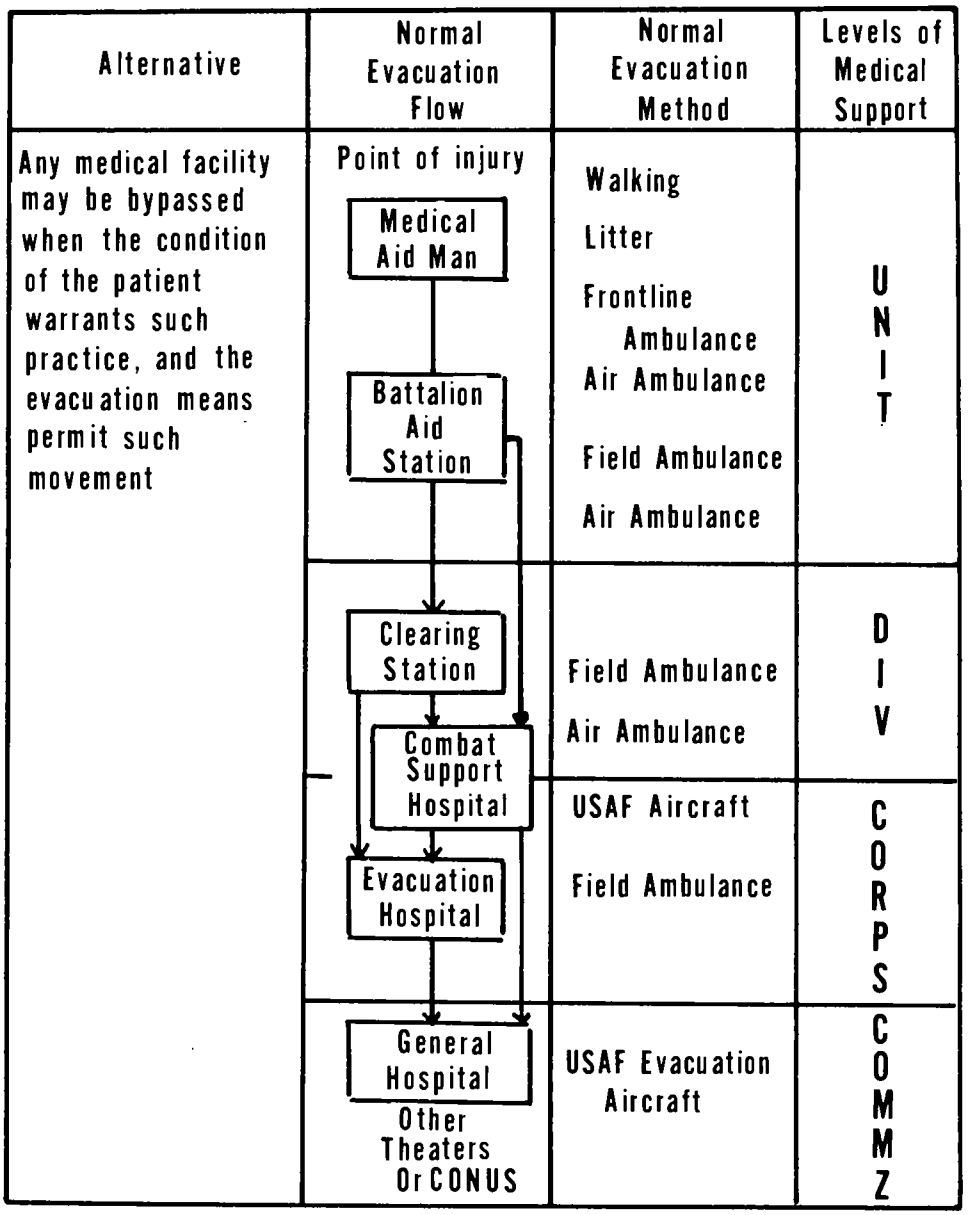


Figure 17-1. Medical evacuation system.

17-13. Sorting (Triage) of Patients

a. Sorting (evaluation or triage) must be done wherever a patient(s) arrives or is seen by Army Medical Department personnel. It is repeated whenever a patient is moved in the evacuation system. Repeated sorting is mandatory to insure that patients receive the best possible medical care. Sorting includes the examination of sick and injured patients and decisions concerning their condition in an effort to insure that they are properly routed to, and within, the appropriate medical facility. Sorting also includes establishing a priority for treatment and assisting in determining the ultimate destination of each patient as early as possible. Sorting is the key to the effective management of patients, for they must not be evacuated farther

than their physical condition or the military situation requires. Every "overevacuated" case imposes upon three agencies. These include the patient's unit, the replacement system, and the Army Medical Department. The patient's unit will be understrength until he is discharged to duty with his unit or he is replaced. The replacement system, in the patient's continued absence, must procure, equip, train, and transport his replacement. The Army Medical Department units needed to care for the same patient would provide the added evacuation, as well as treatment. One such case would not be impressive, but overall, indifferent sorting could jeopardize combat operations. Unnecessary evacuation of patients could be tantamount to subsidized straggling. When decision for hospitalization is made, the illness or injury must be incapacitating or of such nature that significant consequences would result if the patient were returned immediately to duty. This decision is often difficult when there is little time for observing patients. However, when the tactical situation permits, reasonable doubt must be resolved in favor of the patient.

b. While the preceding paragraph describes sorting as customarily performed, contingency plans must exist for emergencies. In a disaster or mass casualty situation, when an overwhelming number of patients vastly exceeds the available Army Medical Department resources (personnel and/or materiel), and their is no possibility of caring for the patients in a reasonable length of time, routine sorting procedures must be changed. Under critical conditions, the most experienced medical officer is usually delegated to supervise sorting or triage. The effort will be to assure beneficial care for the largest number of patients. The critically ill, with the poorest changes for survival, will be kept as comfortable as possible but will receive deferred treatment while those with a better chance to survive will receive priority for the limited care available.

17-14. Evacuation Lag

Evacuation delays will occur frequently for a variety of reasons. Collectively, the delays are referred to as "evacuation lag." If not considered in medical planning, medical facilities may be immobilized and the evacuation system will be retarded. The most significant causes of evacuation lag are—

a. Enemy action and combat requirements.
b. Nonavailability of transportation.
c. Treatment time required en route.
d. Delayed receipt of the evacuation requests.
e. Road, terrain, and weather conditions.

17-15. Theater Patient Evacuation Policy

a. The theater patient evacuation policy is established by the Secretary of Defense, with the advice of the Joint Chiefs of Staff and on the recommendation of the theater commander. The policy states, in numbers of days, the maximum period of noneffectiveness that patients may be held within the command for treatment. The policy does not imply that a patient is held in the theater for the entire period of the theater evacuation policy. Patients who are not expected to return to duty within the number of days expressed in the theater evacuation policy are evacuated as soon as their medical condition permits and responsible medical authorities have determined that travel will not aggravate their disabilities. The application of any evacuation policy is a management tool in the selection of patients, since evacuation requires close and continuing coordination from all command surgeons concerned. The efficiency of medical support operations depends on the effective distribution of patients to facilities capable of providing the required treatment. The time period stated in the theater patient evacuation policy commences with the date of admission to the first hospital. The total time a patient spends in all hospitals in the theater for a single episode of illness (i.e., uninterrupted hospitalization) should not exceed the number of allowable days of hospitalization stated in the theater patient evacuation policy.

b. The theater evacuation policy specified has direct impact on—

(1) The number and type of medical units in the combat zone and the COMMZ.
(2) Medical material.
(3) Hospital construction and engineer support.
(4) Volume and type of transportation.
(5) Theater personnel replacement requirements.
(6) The number of hospital beds required in CONUS to support the oversea theater. The shorter the theater patient evacuation policy is, the fewer the hospitals in the theater and the greater the number of beds required in CONUS. A longer theater patient evacuation policy will increase the number of hospital beds in the theater and decrease the CONUS requirements.

c. Subordinate commands may establish intratheater patient evacuation policies within the limits of the theater patient evacuation policy and subject to approval by the theater commander. For example, a short evacuation policy usually is established for combat zone hospitals so as not to impair their mobility or their capability to accomodate surges of patients. Intratheater patient evacuation policies must be flexible and changed as dictated by the tactical situation. Intratheater

evacuation policies may differ among the hospitals depending on their location, facilities, staffs, and the types of patients received.

17-16. Medical Regulating

a. Medical regulating is the coordination and control of the movement of patients to medical facilities which are best able to provide the required medical care. The medical regulating system insures optimum utilization of resources in the medical evacuation system.

b. Considerations in medical regulating include:

(1) Number and location of patients by diagnostic category.

(2) Patient's condition.

(3) Patients awaiting surgery or other treatment (expressed as backlog in hours).

(4) Current bed status and hence, workload of treatment facilities (i.e., beds available for patients and beds occupied).

(5) Location and status of utilization of specialized treatment and capabilities.

(6) Current and anticipated tactical situation throughout the theater.

(7) Availability of transportation.

(8) Location of heliports, airfields, railheads, and seaports.

c. Medical regulating procedures are under the technical control and supervision of the medical regulating officers (MRO) positioned at various medical headquarters throughout the theater army. The medical regulating officers coordinate with medical organizations throughout the entire command, and require information from them on the status of their patients. Evacuation of patients out of the theater will be regulated through the Theater Joint Medical Regulating Office (JMRO).

17-17. Hospital or Inpatient Care

The term "hospital care" applies to that medical care and treatment for the more seriously ill or injured, or for those patients requiring extended care, as opposed to emergency medical treatment provided outpatients at a hospital. Continual effort must be exerted to return sick or injured personnel to duty as rapidly as possible. Evacuation and hospitalization must always be considered jointly, for they are interdependent in the achievement of efficient operation.

17-18. Medical Civic Action

Medical civic action is medical support provided civilians, preferably through or in reinforcement of the available indigenous medical capability. Its aim is to contribute to the civilians' general welfare and to improve the prestige of the host country medical support. Improvements in those areas, in turn, will reflect credit on the allies as well as on the host country with the indigenous population. Poor health and sanitary conditions may be anticipated in many potential areas of future operations. Such conditions may include inadequate potable water, sewage disposal, housing, sanitary standards, and medical care facilities. Some medical civic action will ensue at all levels of conflict. Its greatest need and importance, however, are in stability operations. The basic principles of medical civic action are—

a. Medical civic action will not interfere with the health service support for US personnel.

b. Although designed to restore, enhance, or maintain public confidence, such programs are not an intentional part of the psychological operations program.

c. While medical civil action will not necessarily solve all health problems, it will supplement public health programs with which it must be coordinated.

d. While medical civic action may extend host government public or private health facilities into remote or unsafe areas, it will not duplicate or otherwise compete with established domestic health services.

e. Emphasis will be directed to solving simple health problems that benefit many people, rather than a major effort to solve major problems of a few people. Serious illness requiring long-term treatment will be referred to the civilian public health service, and transportation to support this referral may be provided.

f. Long-term benefits can be achieved by teaching personal hygiene and sanitation.

g. Civilians injured as a result of military operations will be provided appropriate treatment. Indigenous personnel treated for injuries should be interrogated to determine the cause of injury. Reports of such treatment will be provided to proper authorities.

h. Medical civic action will be coordinated with ACofS, operations, and ACofS, civil-military operations, to direct effort and assure its compatibility with tactical operations.

i. Caution will be exercised in distributing medical supplies to preclude their diversion to the enemy or illicit markets. Locally developed policy and procedures for dispensing medical supplies are required to prevent or minimize the diversion of these civic action supplies. Personnel will be instructed and kept aware of this undesirable possibility.

j. Supply planning for medical civic action is required to insure the timely arrival of supplies for pediatric, gynecological, and geriatric patients.

CHAPTER 18

MILITARY DISCIPLINE

(STANAG 2067, SEASTAG 2067)

Section I. GENERAL

18-1. Responsibility

To maintain discipline, law, and order is a responsibility of command. Commanders and staff officers must anticipate the effect of their plans and activities on discipline, law, and order in the command. Discipline is the state of order and obedience among military personnel. Manifestations of discipline are a willing response to commands under all conditions; proper military conduct; and strict observance of military regulations, civil laws, and customs.

18-2. Objectives

The major objectives of discipline, law, and order are—

a. Combat effectiveness (success in combat is the ultimate aim of discipline).

b. Development of habits and attitudes conducive to obedience.

c. Minimum losses in manpower because of trials, punishment, and confinement.

18-3. Military Justice

a. Military justice is the application of military law to persons subject thereto who are accused of the commission of offenses under the Uniform Code of Military Justice (UCMJ). Military justice is administered in accordance with the UCMJ, the Manual for Courts-Martial, and the decisions of the courts. Included in the system are the procedures relating to trial by courts-martial and to nonjudicial punishment for minor offenses.

b. The staff judge advocate has direct staff responsibility for the administration of military justice in the command (FM 101-5).

Section II. MILITARY POLICE

18-4. Provost Marshal

The provost marshal is the commander's adviser on all law enforcement and related matters and supervises the military police activities of the command. Depending on the employment and mission of the particular command concerned, the provost marshal provides the commander professional advice and recommendations, as may be applicable, within the following military police related technical and functional areas:

a. Enforcement and maintenance of military laws, orders, and regulations.

b. Circulation control, to include vehicular traffic, convoys, refugees, and individuals.

c. Route security/reconnaissance and convoy escort.

d. Crime prevention and investigation.

e. Police intelligence activities, to include data developed in conjunction with indigenous police forces, collection, evaluation, and dissemination of law enforcement and security data.

f. Physical security.

g. Enemy prisoner of war, civilian internee, and detainee activities.

h. Confinement and correctional treatment.

i. Civil disturbance and disaster control operations; friendly and indigenous.

j. Rear area protection (RAP) activities. The potential of this functional capability is of particular value to support command base defense and RAP operations.

k. Stability operations and activities, to include police internal defense operations, combined and joint police operations in towns and on roadways, police intelligence data, police aspects of population and resources management, and police training and advisory activities.

18-5. Support of Stability Operations

In support of stability operations, military police may become directly involved with civilian controls and enforcement of emergency regulations. In ad-

dition to their normal functions, military police in stability operations place special emphasis on circulation control, physical security, civil disturbances and riot control, handling of prisoners, food and other resources control, organization and operation of a police intelligence system in civilian communities, and other specialized techniques for control of civilians. Military police can provide plans, advice, training, and supervision to civilian police personnel in population and resources management measures, technical police operations, and investigations. Additional details on the military police role during stability operations are contained in FM 19-50.

Section III. RELATED ACTIONS

18-6. Straggler Control

a. Stragglers are military personnel in the combat zone or on maneuvers who are away from their unit without proper authority. Straggler control is a function of command at all echelons and is conducted by commanders throughout their areas of responsibility.

b. A straggler line is an MP control line, which may be manned or unmanned. The prevailing type of action determines the specific location of the line. Straggler lines are normally along lateral lines of communication and easily identifiable terrain features. Normally, straggler lines of adjacent units connect. Military police apprehend stragglers, line crossers, and infiltrators in the rear of the line.

c. While straggler posts are not established routinely, they may be organized at critical points, usually on the natural lines of drift to the rear. When established, posts are interconnected by communications, and patrols operate between posts. The posts are located in defilade and concealed from enemy observation. Normally, traffic control posts and traffic patrols have the additional duty of straggler control.

d. Straggler collecting points are designated locations (usually an MP station or headquarters) where stragglers are assembled for return units or for evacuation to the rear. The provost marshal plans and coordinates the establishment of these collecting points and arranges transportation when required. Collecting points are near a medical facility to permit medical sorting of stragglers.

18-7. Establishment of Confinement Facilities

The PERSCOM operates confinement facilities for US military prisoners and, when requested, relieves the combat forces and area support commands of such prisoners within theater army policies. Prisoners confined in these facilities normally include those who have been tried and whose sentences do not include punitive discharges.

CHAPTER 19

GRAVES REGISTRATION

(STANAG 2070)

19-1. General

a. Graves registration in support of military operations is the responsibility of the ACofS, services, who provides for—

(1) Search, recovery, and evacuation of remains of deceased military personnel, certain civilians, and Allied and enemy personnel as required.

(2) Identification and temporary disposition of remains.

(3) Recovery and disposition of personal effects.

(4) Establishment, operation, and maintenance of temporary military cemeteries.

(5) Preparation of pertinent records and reports.

b. Details on organization, functions, and operations relating to the handling of deceased personnel in the theater of operations are provided in FM 10-63.

19-2. Objectives of Graves Registration

a. An efficient graves registration service maintains adequate sanitation, sustains military and civilian morale, and complies with the laws of land warfare. The morale factor includes that of the military and the civilian population. Much of the work of the graves registration service is directed towards maintaining harmonious public relations with the civilian population of the United States. Prompt evacuation and burial normally satisfies the requirements of preserving adequate sanitation of the area and morale of the combat troops.

b. The laws of land warfare require that each belligerent establish a graves registration service to insure prompt and adequate care for deceased enemy personnel.

c. The system of graves registration insures—

(1) Prompt and accurate identification of remains.

(2) Evacuation of remains to a cemetery and proper interment.

(3) Marking and registering of graves so that remains may be disinterred and final disposition accomplished.

(4) Search and attempted recovery of remains.

(5) Forwarding of personal effects found on the remains to the proper recipient.

(6) Prompt, accurate, and complete administrative recording and reporting.

CHAPTER 20

ENEMY PRISONERS OF WAR AND CIVILIAN INTERNEES/DETAINEES

20-1. General

a. In the treatment of enemy prisoners of war (PW) and civilian internees/detainees, the United States adheres to the customary laws of land warfare and to the following international agreements:

(1) Geneva Convention Relative to the Treatment of Prisoners of War of 12 August 1949, hereinafter referred to as the Geneva (PW) Conventions.

(2) Geneva Convention Relative to the Protection of Civilian Persons in Time of War of 12 August 1949, hereinafter referred to as the Geneva (Civilian Persons) Convention.

(3) Geneva Convention for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field, 12 August 1949, hereinafter referred to as GWS.

(4) Geneva Convention for the Amelioration of the Wounded, Sick, and Shipwrecked Members of Armed Forces at Sea, 12 August 1949, hereinafter referred to as GWS Sea.

(5) Hague Convention No. IV of 1907, hereinafter referred to as the Hague Regulations.

b. The governing motive of these conventions is to provide for the humane treatment of all personnel in the custody of parties to a conflict. The conventions regulate in detail the treatment of PW and civilian internees, and detainees including—

(1) Care, food, and clothing.
(2) Discipline and punishment.
(3) Labor and pay.
(4) External relations.
(5) Representation.
(6) Information agencies, centers, and bureaus.
(7) Termination of captivity.

c. The Geneva (PW) Convention provides that upon the outbreak of hostilities, and in all cases of occupation, parties to the conflict establish an official PW information center. The convention also provides for the creation of a central PW information agency in a neutral country. These two activities assist in the collection and exchange of information pertaining to PW held by parties to the conflict. The PW information center collects personal valuables left by PW who are repatriated or released, or who have escaped or are deceased, and transmits these valuable to the powers concerned. The branch PW information centers normally retain the personal effects of enemy dead in the oversea area rather than forwarding them to the continental United States.

d. The PW Center can also operate as a civilian internee information center to assist in the collection and exchange of information pertaining to civilian internees held by parties to the conflict. As the civilian internee information center it performs the same functions with respect to civilian internees that it performs with respect to PW.

e. Detailed coverage of the handling of enemy PW, civilian internees/detainees is contained in FM 19-40. Provisions of treaties governing land warfare may be found in DA Pam 27-1.

20-2. Terms

a. Prisoners of War. Upon capture, persons belonging to one of the following categories are classified by the Geneva (PW) Convention as PW—

(1) Members of the armed forces of an enemy party to the conflict, as well as members of militias or volunteer corps forming part of these armed forces.

(2) Members of other militias and of other volunteer corps, including those of organized resistance movements, belonging to an enemy party to the conflict, provided they—

(*a*) Are commanded by a person responsible for his subordinates.

(*b*) Have a fixed distinctive sign recognizable at a distance.

(*c*) Carry arms openly.

(*d*) Conduct their operations in accordance with the laws and customs of war.

(3) Members of regular armed forces who profess allegiance to a government or an authority not recognized by the detaining power.

(4) Persons who accompany the enemy armed forces without actually being members thereof (such as war correspondents and supply contractors), provided they have received authorization from the armed forces they accompany and have in their possession the prescribed identification cards.

(5) Members of crews of the merchant marine and the crews of civil aircraft of an enemy party to the conflict who do not benefit by more favorable treatment under any other provisions of international law.

(6) Inhabitants of a nonoccupied territory who,

on the approach of the enemy, spontaneously take up arms to resist the invading forces, without having had time to form themselves into regular armed units, provided they carry arms openly and respect the laws and customs of war.

b. Civilian Internees/Detainees. Civilian internees or detainees are persons protected by the Geneva (Civilian Persons) Convention and who are interned or detained—

(1) For security reasons, in accordance with Article 78 of the convention.

(2) Because they have been convicted of an offense against the detaining power and sentenced to internment or detainment pursuant to Article 68 of the convention.

c. Retained Personnel. The term "retained personnel" refers to certain categories of personnel exclusively engaged in medical or religious duties, such as medical personnel and chaplains. Retained personnel are not considered to be PW. For security purposes, however, and so that their services may be properly used, they remain in PW installations and receive treatment no less favorable than that of PW of equivalent rank. These personnel may be retained only for as long as their services are needed by the retaining power.

d. Protecting Power. The term "protecting power" refers to a neutral power that, with the consent of two opposing parties to the conflict, endeavors to safeguard the interests of one of the parties to the conflict and thereby acquires certain duties by virtue of the Geneva (PW) Convention. Representatives of the protecting power are permitted to visit PW wherever they are located. The representatives report to the party to the conflict whose interest they represent concerning the treatment being accorded to personnel held as PW. Humanitarian agencies, such as the International Committee of the Red Cross, may be possible substitutes for a protecting power.

20-3. Objectives

The more important objectives sought in handling enemy PW and civilian internees/detainees include—

a. Acquisition of maximum intelligence information subject to constraints imposed by the laws of land warfare.

b. Prevention of escape and liberation.

c. Conservation of the handling agency's own resources.

d. By example, encouragement of proper treatment of friendly power's own personnel captured by the enemy.

e. Weakening of the enemy's will to resist capture.

f. Making maximum use of PW and civilian internees as sources of labor in accordance with the articles of the Third Geneva Convention.

g. Encouraging, in a manner consistent with the laws of land warfare, maximum cooperation between the PW and detaining authorities.

20-4. Principles

The principles used in achieving the objectives sought in handling PW and civilian internees/detainees include—

a. Provisions of humane treatment.

b. Prompt evacuation from the combat zone.

c. Provision of opportunity for interrogation.

d. Indoctrination of troops in the provisions of international agreements and regulations relating to PW and civilian internees.

e. Integration of the procedures for evacuation, control, and administration of PW and civilian internees with other combat service support operations.

20-5. Army Responsibilities

From the moment of capture, the Army is responsible for PW and civilian internees taken by its own forces. The Navy and the Air Force are responsible for PW and civilian internees captured by their respective forces until such time as the PW and the civilian internees are delivered to designated Army receiving points. After delivery to these receiving points, the Army is responsible for the PW and civilian internees. Specific Army responsibilities include—

a. Evacuation from the receiving points.

b. Internment.

c. Medical care.

d. Treatment.

e. Education.

f. Religious care.

g. Employment and compensation.

h. Repatriation.

i. Operation of PW and civilian internee information centers.

j. Maintenance of an appropriate office of record.

20-6. Prisoner of War and Civilian Internees in Stability Operations

a. General. Details on the handling of PW and civilian internees and detainees in stability operations are contained in FM 19-40.

b. Control Measures. The imposition of control measures during stability operations results in the capture and detention of insurgents, sympathizers, suspects, combatants who surrender under provisions of host country amnesty programs, and civilians who do not support the insurgents, as well as the confiscation of contraband critical materiel.

Measures for handling, accountability, and disposition should include—

(1) Segregation as soon as practicable.

(2) Provision of local detention and interrogation facilities.

(3) Provision for interrogation by host country police and intelligence personnel.

(4) Documentation of circumstances of capture and recording in local police files for analysis of trends and patterns.

(5) Documentation and distribution of intelligence obtained.

(6) Trial of captured/detained personnel in accordance with international law and host country/US agreements.

(7) Rapid transfer of combatants who surrender under amnesty programs to rehabilitation centers.

(8) Identification of confiscated materiel, including circumstances of confiscation, and the safeguarding and turning over of the materiel to the appropriate authority when requested.

(9) Detailed accountability for captured/detained personnel while they are in the custody of US forces.

c. *Amnesty and Rehabilitation.* Amnesty includes the encouragement of enemy defections through a system of reward programs. Defectors or prisoners may receive payment for: information, capture of insurgent leaders, and turn-in of insurgent weapons and equipment. Defectors may also be used profitable in psychological operations directed toward the population to counteract insurgent propaganda. Amnesty and rehabilitation programs should include—

(1) Provisions, whenever possible, to allow previously disloyal members of the population to revert to the support of the government without fear of punishment for previous antigovernment acts.

(2) Equitable execution of the programs aimed at causing disaffection among the insurgents and their supporters.

(3) Rehabilitation of former insurgents and their supporters through a program of reeducation.

APPENDIX A

REFERENCES

A-1. Army Regulations (AR)

10-5	Department of the Army.
(C) 10-122	United States Army Security Agency (U).
11-8	Principles and Policies of the Army Logistics System.
(S) 11-11	Major Command Stockage Levels Worldwide (U).
11-14	Logistic Readiness.
40-61	Medical Materiel Policies and Procedures.
59-106	Operation of Air Force Air Terminals.
71-5	Introduction of New or Modified Systems/Equipment.
165-20	Duties of Chaplains and Commanders Responsibilities.
230-1	Nonappropriated Fund System.
310-1	Publications, Blank Forms, and Printing Management.
310-25	Dictionary of United States Army Terms (Short Title: AD).
310-49	The Army Authorization Documents System (TAADS).
310-50	Authorized Abbreviations and Brevity Codes.
380-41	Department of the Army Policy for the Control of COMSEC Material.
415-16	Army Facilities Components System (Military Engineering Construction Support Designs, Materiel and Planning Data).
600-10	The Army Casualty System.
600-30	Human Self Development Program.
630-5	Leave, Passes, Administrative Absence and Public Holidays.
672-5-1	Military Awards.
700-4	Logistics Assistance Program.
710-1	Centralized Inventory Management of the Army Supply System.
710-2	Materiel Management for Using Units, Support Units, and Installations.
725-50	Requisitioning, Receipt, and Issue System.
725-65	Operational Projects.
750-1	Army Materiel Maintenance Concepts and Policies.
750-51	Maintenance Assistance and Instruction Team (MAIT) Program.
755-5	Collection, Classification, Consolidation, and Processing of Retrograde Materiel.

A-2. Department of the Army Pamphlets (DA Pam)

5-2	Improvement Tools for Soldier Managers.
5-2-1	MAP-TOE Manager's Handbook.
27-1	Treaties Governing Land Warfare.
608-2	Your Personal Affairs.
690-80	Use and Administration of Local Civilians in Foreign Areas During Hostilities.
700-22	Direct Support System (DSS).
710-13	Selected Item Management System.
750-1	Commander's Guide of Preventive Maintenance Indicators.

A-3. Joint Chiefs of Staff Publications (JCS Pub)

1	Dictionary of US Military Terms for Joint Usage (Short Title: JD).
(FOUO) 2	Unified Action Armed Forces (UNAAF).
(C) 3	Joint Logistics and Personnel Policy and Guidance (U).

A-4. Field Manuals (FM)

3-12	Operational Aspects of Radiological Defense.

5-20	Camouflage
5-146	Engineer Topographic Units.
5-162	Engineer Construction and Construction-Support Units.
8-10	Medical Support, Theater of Operations.
8-15	Medical Support in Divisions, Separate Brigades, and the Armored Cavalry Regiment.
9-6	Ammunition Service in the Theater of Operations.
9-14	Explosive Ordnance Disposal Service.
9-59	Missile Support Unit Operations.
10-13	Supply and Service Reference Data.
10-67	Petroleum Supply in Theaters of Operations.
11-40	Tactical Audio-Visual Doctrine.
12-2	Personnel and Administrative Support in Theaters of Operation.
14-3	Comptroller Support in Theaters of Operation.
16-5	The Chaplain.
19-4	Military Police Support, Theater of Operations.
19-40	Enemy Prisoners of War and Civilian Internees.
27-10	The Law of Land Warfare.
29-2	Organizational Maintenance Management.
29-6	The Personnel Command.
29-10	Supply Management in the Field Army.
29-20	Maintenance Management in Theaters of Operations.
29-23	Direct Support Maintenance Operations (Nondivisional).
29-24	General Support Maintenance Operations.
29-30	Maintenance Battalion and Company Operations in Divisions and Separate Brigades.
29-30-1	Division Maintenance Battalion.
30-9	Military Intelligence Organizations.
31-11	Doctrine for Amphibious Operations.
31-12	Army Forces in Amphibious Operations (The Army Landing Force).
31-21	Special Forces Operations—US Army Doctrine.
(C) 31-40	Tactical Cover and Deception (U).
31-75	Riverine Operations.
31-82	Base Development.
31-85	Rear Area Protection (RAP) Operations.
(C) 32-5	Signal Security (SIGSEC) (U).
(S) 32-10	USASA in Support of Tactical Operations (U).
(C) 32-20	Electronic Warfare (U).
33-1	Psychological Operations—US Army Doctrine.
38-5	Logistics Maintenance Management.
38-24	Classes of Supply.
41-10	Civil Affairs Operations.
54-2	The Division Support Command and Separate Brigade Support Battalion.
54-6	Area Support Command.
54-7	Theater Army Support Command (TASCOM).
54-9	Corps Support Command (COSCOM).
55-1	Army Transportation Services in a Theater of Operations.
55-10	Army Transportation Movements Management.
55-11	Army Movement Control Units.
55-20	Army Rail Transport Operations and Units.
55-30	Army Motor Transport Operations.
55-40	Army Combat Service Support Air Transport Operations.
55-60	Army Terminal Operations.
57-1	US Army/US Air Force Doctrine for Airborne Operations.
61-100	The Division.
100-5	Operations of Army Forces in the Field.

100-15 (TEST)	Larger Unit Operations. Internal Defense and Development US Army Doctrine.
100-27	US Army/US Air Force Doctrine for Tactical Airlift Operations.
100-30 (TEST)	Tactical Nuclear Operations.
101-5	Staff Officers' Field Manual—Staff Organization and Procedure.
101-10-1	Staff Officers' Field Manual—Organization, Technical, and Logistic Data (Unclassified Data).

A-5. Technical Manuals (TM)

5-301- 1, 2, 3, 4,	Army Facilities Components System—Planning.
5-302- 1, 2	Army Facilities Components System—Designs.
5-303	Army Facilities Components System—Logistic Data and Bills of Materials.
9-1300-206	Ammunition and Explosives Standards.
750-172	Procedures for Rapid Deployment, Redeployment and Retrograde for Chemical Ammunition.
750-178	Procedures for Rapid Deployment, Redeployment and Retrograde of Fuzes.
750-210	Procedures for Rapid Deployment, Redeployment and Retrograde: Facility Development Guide.

A-6. Supply Bulletins (SB)

38-1	Classes of Supply.
(C) 38-26	Ammunition Supply Rates (U).

A-7. Other Publications

UCMJ	Manual for Courts-Martial United States 1969 (Revised Edition).
CPR 900 (C1)	Mobilization Planning and Execution.

APPENDIX B

ABBREVIATION INDEX

		Paragraph	Page
	A		
AAFES	Army and Air Force Exchange Service	9-43*b*	9-31
ACofS	Assistant Chief of Staff	11-1*e*	11-1
ACSC-E	Assistant Chief of Staff for Communications-Electronics	52-*b*	5-1
ADP	automatic data processing	2-4*d*	2-2
ADPC	automatic data processing center	9-11*b*	9-9
ADPE	automatic data processing equipment	1-2*b*	1-1
AFCS*	Army Facilities Component System	13-2*e*	13-1
AG	Adjutant General	9-36	9-30
ALOC*	air lines of communication	11-27*a* (2)	11-7
ASA	Army Security Agency	7-1	7-1
ASG*	area support group	3-4*b* (4)	3-8
ASP	ammunition supply point	9-32*a*	9-22
ASPR	Armed Services Procurement Regulation	9-23*d*	9-12
	B		
BDP	base development plan	4-11*b*	4-3
	C		
CA	civil affairs	2-4*h*	2-3
CBR	chemical, biological and radiological	13-10*d*	13-4
C-E	Communications-Electronics	3-13*b* (3)	3-16
CI	counterintelligence	4-15*c*	4-5
CIMIC*	Civil Military Cooperation	6-2*a*	6-1
CIMIR*	Civil Military Relations	6-2*a*	6-1
CLSC	COMSEC logistic support center	3-13*b* (1)	3-16
CLSU	COMSEC logistic support unit	3-13*b* (1)	3-16
CMO	civil-military operations	3-14	3-16
COGS	Combat (systems) oriented general support (maintenance)	10-24	10-3
COMINT	communications intelligence	5-5*a*	5-2
COMMZ	communications zone	3-3*a*	3-1
COMSEC	communications security	3-13*a*	3-15
CONUS	Continental United States	2-2*a*	2-1
COSCOM	corps support command	3-4*b* (1)	3-6
CPR	civil personnel regulations	13-7	13-3
CRAF	Civil Reserve Air Fleet	11-27*a* (1)	11-7
CS*	combat support	1-3	1-1
CSR	controlled supply rate	9-32*e*	9-26
CSS	combat service support	1-1*a*	1-1
CTA	common table of allowances	9-17*a* (1)	9-9
	D		
DA	Department of the Army.		
DCA	Defense Communications Agency	5-1*d*	5-1
DCS	Defense Communications System	3-12*e* (3)	3-15
DCSLOG	Deputy Chief of Staff for Logistics	10-7*c*	10-9
DISCOM	division support command	3-4*b* (1)	3-6

*Abbreviation not contained in AR 310-50.

		Paragraph	Page
DS	direct support	3-4*b* (4)	3-8
DSA	Defense Supply Agency	4-1*c*	4-1
DSS	Direct Support System	9-5	9-4
DSU	direct support unit	9-5*b*	9-4
DX	direct exchange	9-34*c*	9-29
	E		
EMT	emergency medical treatment	17-9*a*	17-3
ENCOM*	engineer command	3-4*b* (3)	3-8
ESM	Electronic Warfare Support Measures	5-5*a*	5-2
EW	Electronic Warfare	5-5*c*	5-2
	F		
FORSCOM	Forces Command	10-7*c*	10-9
	G		
GI	assistant chief of staff, personnel	14-11	14-3
GS	general support	3-4*b* (3)	3-8
GSU	general support unit	9-5*b*	9-4
GWS	Geneva Convention for the Amelioration of the condition of the wounded and sick in Armed Forces in the Field, 12 Aug 1949	20-1*a* (3)	20-1
	H		
HPA	Head of Procuring Activity	9-23*e*	9-12
	J		
J4	logistics directorate	11-1*c*	11-1
JCS	Joint Chiefs of Staff	3-8*a*	3-11
JMRO	Joint Medical Regulating Office	17-16*c*	17-6
JOPS*	Joint Operations Planning System	4-11*b*	4-3
JPO	Joint Petroleum Office	9-30*f* (3)	9-19
JTB	Joint Transportation Board	11-1*c*	11-1
JUWTF	Joint Unconventional Warfare Task Force	8-5*c*	8-3
	L		
LIF*	Logistics Intelligence File	9-5*d* (2)	9-5
LOC	lines of communication	2-3*a*	2-1
LOTS	logistics over the shore operations	11-9*h*	11-3
LRO*	logistics readiness officer	8-2	8-1
	M		
MAAG	Military Assistance Advisory Group	8-5*c*	8-3
MAC	Military Airlift Command	11-2*b*	11-1
MAIT*	Maintenance Assistance and Instruction Team	10-3*h* (4)	10-3
MCA*	movement control agency	11-25	11-7
MCC	movement control center	3-19*e*	3-18
MEDCOM	medical command	3-4*b* (3)	3-8
MEL*	maintenance expenditure limit	12-5*a* (3)	12-1
MI	military intelligence	3-12*e* (4)	3-15
MILSTRIP	Military Standard Requisitioning and Issue Procedures	9-21*c*	9-11
MILVAN	military-owned demountable container	12-7	12-2
MMC	materiel management center	3-19*e*	3-18
MODS	Modular oriented direct support (maintenance)	10-25	10-14
MOS	military occupational specialty	14-8*c*	14-2

*Abbreviation not contained in AR 310-50.

		Paragraph	Page
MP	military police	3-18*b*	3-17
MRO	medical regulating office(r)	11-7*d*	11-2
MSC	Military Sealift Command	11-2*b*	11-1
MSR	main supply route	11-9*a* (1) (a)	12-3
MTDA	Modification Table of Distribution and Allowances	4-10	4-2
MTOE	Modification Table of Organization and Equipment	4-10	4-2
	N		
NBC	nuclear, biological, chemical	2-3*a*	2-1
NICP	national inventory control point	9-5*b*	9-4
NMP	national maintenance point	10-1*b*	10-1
	O		
OPLAN	operation plan	4-11*b*	4-3
ORF*	operational readiness float	10-4*a*	10-3
	P		
PAC	personnel and administration center	16-3*a*	16-3
PERSCOM*	personnel command	3-4*b* (3)	3-8
PM	preventive maintenance	10-1*d* (4)	10-2
POMCUS	prepositioning of materiel configured to unit sets	9-17*a* (2)	9-9
PSYOP	psychological operations	2-4*h*	2-3
PW	prisoner of war	2-4*f*	2-3
	Q		
QSS*	Quick Supply Store	10-8*c*	10-9
	R		
R&R	rest and recuperation	15-3*b*	15-1
RAOC*	rear area operations center	4-16*a* (1)	4-5
RAP	rear area protection	3-12*a* (4)	3-14
RCF*	repair cycle floats	10-4*b*	10-3
RICC	reportable item control code	9-5*d* (3)	9-6
RPMA	real property maintenance activities	3-4*b* (4)	3-8
RSR	required supply rate	9-32*e*	9-26
	S		
SLA	special ammunition load	9-32*f* (1)	9-27
SALE*	special ammunition logistic element	9-32*a*	9-22
SLAS*	Standard Army Logistics System	8-1*a*	8-1
SAPO	subarea petroleum office	9-30*f* (3)	9-19
SASP	special ammunition supply point	9-32*a*	9-22
SEASTAG	SEATO Standardization Agreement	1-1*b*	1-1
SEAVAN	commercial or Government-owned (or leased) shipping container	12-7	12-2
SIMS	Selected Item Management System	9-5*d* (1)	9-5
SOLOG	Standardization of Certain Aspects of Operations and Logistics	1-1*b*	1-1
SOP	standing operating procedures	11-23*b* (1)	11-6
STANAG	Standardization Agreement	1-1*b*	1-1
	T		
TA	theater army	3-1	3-1
TAACOM*	theater army area command	3-4*b* (3)	3-8

*Abbreviation not contained in AR 310-50.

		Paragraph	Page
TAADS	The Army Authorization Documents System	4-3*a*	4-1
TACCOM	theater army communications command	3-12*d* (8)	3-15
TACS	theater army communications system	3-12*e 3*]	*3-15*
TAF	tactical air force	7-3*c*	7-1
TCAC*	theater civil affairs command	3-12*d* (5)	3-15
TCLSA	theater COMSEC logistic support center	3-13*b* (1)	3-16
TCMD	transportation control and movement document	12-9*c* (1) (c)	12-4
TDY	temporary duty	4-7	4-2
TI	technical inspection	12-5*b*	12-1
TMDE	Test Measurement and Diagnostic Equipment	10-1*d* (2)	10-1
TOC	tactical operations center	9-32*g* (2)	9-28
TOD*	theater oriented depot	9-5*c*	9-4
TOE	table(s) of organization and equipment	4-9*c*	4-2
TRANSCOM*	transportation command	3-4*b* (3)	3-8
TSG	The Surgeon General	3-19*e* (7)	3-20
	U		
UCMJ	Uniform Code of Military Justice	18-3*a*	18-1
USASA	United States Army Security Agency	3-12*d* (9)	3-15
UW	unconventional warfare	8-5*a*	8-2
	V		
VIC*	Visibility of Intransit Cargo System	9-5*d* (3)	9-6
	W		
WWMCCS	worldwide military command and control system	3-12*e* (4)	3-15

*Abbreviation not contained in AR 310-50.

APPENDIX C

STANDARDIZATION AGREEMENTS

C-1. The following types of international standardization agreements are included in this appendix:

a. STANAG—Standardization Agreement; NATO Military Agency for Standardization (MAS).

b. CENTO STANAG—Standardization Agreement: Applicable to nations of the Central Treaty Organization (CENTO).

c. SEASTAG—Southeast Asia Standardization Agreement: Applicable to nations of the Southeast Asia Treaty Organization (SEATO).

d. SOLOG—Standardization of Operations and Logistics: A nonmateriel agreement applicable to the American, British, Canadian, Australian (ABCA) nations.

C-2. The STANAGs and SOLOGs which are similar in their provisions have the SOLOG number in parenthesis next to the STANAG number.

DETAILS OF AGREEMENT

AMMUNITION—SUPPLY PROCEDURE

AGREEMENT

1. It is agreed that the armies of CENTO* nations are to use the ammunition supply procedure and the ammunition requisition/demand, issue and reporting forms described in this Agreement for all international and allied transactions.

GENERAL

2. The organization of national forces is considered in the form fixed by each nation and this Agreement is limited to the procedure concerning existing limits of supply and conditions relating to such supply.

3. Industrial supply of ammunition is not within the scope of this Agreement.

DEFINITIONS

4. The following definitions are to be found in CAA P-6 "Military Terms and Definitions" in English but are repeated here for convenience.

a. Basic Load (Ammunition). The quantity of nonnuclear ammunition which is authorized and required by each nation at all times. It is expressed in rounds, units or units of weight as appropriate.

b. Required Supply Rate (Ammunition). The required supply rate is the amount of ammunition expressed in terms of rounds per weapon per day for ammunition items fired by weapons, and in terms of other units of measures per day for bulk allotment and other items, estimated to be required to sustain operations of any designated force without restriction for a specified period.

c. Available Supply Rate (Ammunition). The available supply rate is the rate of consumption of ammunition that can be allocated, considering the supplies and facilities available, for a given period. For ammunition items fired from weapons, this rate is expressed in rounds per weapon per day. For other items, such as antitank mines, hand grenades, demolition explosives, etc., the rate is expressed in terms of units of measure for specified items, e.g. per day, per week, (each unit of measure, kilos, pounds or tons, metric, short, long, is to be specified).

COMMAND RESPONSIBILITY

5. Each national commander is responsible that adequate stocks of ammunition are available for his assigned or attached units/formations, and that the necessary transport is available within his allocation to place such stocks within reach of the using formation/unit.

DETERMINATION OF REQUIREMENTS

6. The commander must have an up-to-date knowledge of the ammunition situation within his command. In order that each level of command may comply with this requirement, it is mandatory that each commander notify the next higher commander of the basic load of his unit (particularly when coming under another commander), and his required supply rate at such items as the higher commander prescribes.

7. Tactical commanders are to use the required supply rate to state their requirements for ammunition to support planned tactical operations at specified intervals. The required supply rate is submitted through command channels. It is consolidated at each echelon and is considered by each commander is subsequently determining the available supply rate within his command.

*Also applies to NATO and SEATO nations

ALLOCATION RESOURCES

8. The available supply rate is determined at the superior level and submitted successively by each commander. It is therefore determined progressively from the superior to the lower levels. Except in emergencies, subordinate commander must conduct operations within the announced available supply rate.

RECEIPTS AND ISSUES

9. Attached at Annex A is a general form which is to be used for any or all of the following:

a. Ammunition Status Report. This form is to be used by any level of command up to Army when required to report the quantity of ammunition, excluding basic load, which is on hand. The form is permissive rather than mandatory, for use at Army level and above. Detailed instructions as applicable, are shown in column 2 of Annex B.

b. Ammunition Requisition. Using formations/units normally obtain ammunition from ammunition installations by means of an ammunition requisition. The ammunition requisition is a requisition and MUST BE AUTHENTICATED. In a tactical emergency any request which identifies the unit and the type and quantity of ammunition is to be honoured, provided the circumstances and the request are within reason. Detailed instructions, as applicable, are shown in column 3 of Annex B.

c. Transfer Request. Transfer orders are prepared by the designated officer to direct the transfer of ammunition from one supply installation to another. Detailed instructions, as applicable, are shown in column 5 of Annex B.

IMPLEMENTATION OF THE AGREEMENT

10. This STANAG will be considered to have been implemented when the necessary orders/instructions putting the procedures and forms detailed in this Agreement into effect have been issued to the forces concerned.

ANNEXES: A. Ammunition Supply Form
B. Instructions for completing the Ammunition Supply Form

ANNEX A TO STANAG 2034

AMMUNITION SUPPLY FORM

1. (Check Use) Allocation Other: Requisition	2. Date: 3. Time
4. From	5. To: Copies to:
6. Location of Ammunition:	
7. Instructions:	

8. Amount	9. Code	10. Standard Nomenclature or Description of Items:

11. Initated by: (Signature)	13. Approving Office No.	14. Receiving Office No.	15. Date Time
12. Approved by: (Signature)		16. Received by:	

NOTE: The national language, if other than English is to appear under the English language on this form.

ANNEX B TO STANAG 2054

INSTRUCTIONS FOR COMPLETING THE AMMUNITION SUPPLY FORM

Column 1	Column 2	Column 3	Column 4	Column 5
In Box Marked:	Ammunition Status Report Enter:	Ammunition Requisition Enter:	Transfer Request Enter:	Transfer Order Enter:
1. (check use) Allocation Requisition Other	'X' opposite 'other' and add 'Ammunition Report'	'X' opposite 'Requisition'.	'X' opposite 'other' and add 'Transfer Request'.	'X' opposite 'other' and add 'Transfer Order'.
2. Date (Top of page).	Date of Report.	Date initiated.	Date initiated.	Date initiated.
3. Time (Top of page).	Time of Report	Time initiated.	Time initiated.	Time initiated.
4. From	Designation of Reporting Unit.	Office authenticating Transportation Order (When appropriate, give unit designation).	Requesting Organization.	Command Directing Transfer
5. To	Headquarters to which report is being made	Installation designated to supply the ammunition	Office upon which request is made	Designation of supply installation from which ammunition is to be transferred

Column 1	Column 2	Column 3	Column 4	Column 5
6. Location of Ammunition	Not normally Used.	Not used.	Depot where ammunition is located and from which transfer is to be made.	Normally left blank when transfer order is sent directly to supply installation.
7. Instructions.	Any instructions or necessary information	Any special instructions or necessary information.	Designation of ammnition supply installations to which transfer is to be made, and any other pertinent instructions.	Consignee and any necessary special instructions.
8. Amount	Quantity, excluding basic load, on hand in reporting unit.	Number of rounds required.	Quantity requested.	Quantity of each type to be moved.
9. Code.	Appropriate ammunition identification code	Appropriate ammunition identification code	Appropriate ammunition identification code	Appropriate ammunition identification code.
10. Standard Nomenclature or description.	Nomenclature or description of items	Nomenclature or description of items.	Nomenclature or description of items	Nomenclature or description of items

Column 1	Column 2	Column 3	Column 4	Column 5
11. Initiated by (Signature)	Name, Rank, Title, and Signature of Officer responsible for preparation	Name, Rank, Title & Signature of officer responsible for preparation	Name, Rank, Title and Signature of appropriate staff officer	Name, Rank, Title and Signature of officer preparing the order
12. Approved by (Signature)	Name, Rank Title and Signature of officer approving the report, if such is required.	Name, Rank, Title and Signature of authenticating officer.	Name, Rank, Title and Signature of appropriate staff officer.	Name, Rank, Title and Signature of officer approving the order
13. Approving Office No.	(1) Local file reference No. or registry No. if one is used.	Voucher No. Assigned by authenticating officer	Number assigned by the requesting office.	Reference No. assigned by issuing officer.
14. Receiving Office No.	(1) Local file reference No or Registry No if one is used	Voucher No. assigned by issuing installation	Number assigned by receiving office	Voucher No. of supply installation.
15. Date Time	(1) Date and Time Report is received	Date and Time the ammunition is issued.	Date and time request is received.	Date and Time order is received.
16. Received by	(1) Name, Rank, Title and Signature of officer receiving the report	Name, Rank, Title and Signature of ammunition commander when ammunition is issued.	Name, Rank, Title and Signature of officer or his representative who receives the request.	Name, Rank, Title and Signature of the commander of the installation ordered to make transfer.

STANAG No. 2043

DETAILS OF AGREEMENT

PRINCIPLES AND PROCEDURES FOR ESTABLISHING COMMUNICATIONS

AGREEMENT

1. It is agreed that the army forces of the CENTO* countries are to adopt the principles and procedures outlined herein for establishing communications.

GENERAL

2. Standardization of equipment is essential to the degree necessary to ensure that communications between allied armies are capable of integration where required.

3. Where it is not possible to achieve the required degree of integration with present day equipment, it is necessary to provide communications between armies either by:

a. Transferring equipment.

OR

b. Liaison detachments provided by the responsible formation headquarters (see Paragraph 5 and STANAG 2101).

PRINCIPLES FOR PROVISION OF COMMUNICATIONS

4. *Lateral Communications.* Lateral communications between adjacent units/formations for headquarters/command posts are to be established from left to right unless otherwise directed by superior authority.

5. *Communications with Superior and Subordinate Unit/Formation Headquarters.* With the resources at the disposal of the Commander, a unit/formation is responsible for the establishment and maintenance of signal communications to the headquarters/command post of an immediately subordinate unit/formation. This may include the provision of a detachment.

6. *Communications with Supporting Unit/Formation(s).* The general principle of communications between supporting and supported units/formations of the same level, is that supporting units/formations provide communications to units/formations being supported.

Note: British Army armoured units and formations are, however, responsible for establishing radio communications with supporting infantry.

7. *Signal Communications for Other Services.* Armies may have certain definite responsibilities towards navies and air forces for the provision and installation and maintenance of land lines and truck messenger services, which are not specifically covered in this Agreement.

TACTICAL LEVELS AT WHICH COMMUNICATION IS ESSENTIAL

8. Communications for command purposes within an integrated force are required down to battalion or equivalent level.

9. Lateral communications between elements of adjacent forces are essential at all levels down to battalion or equivalent level and may be required down to company and squadron level.

10. Communication is essential between the unit/formation headquarters being supported and the unit/formation of the supporting unit.

MINIMUM SCALE OF COMMUNICATIONS TO BE PROVIDED

11. The minimum scale of communications that is to be provided for command needs is as follows:

a. From Brigade/Brigade Group/Equivalent Formation down to Units-

*Also applies to NATO and SEATO countries.

/Formations Under Command. Two independent voice radio circuits, which may be provided over radio nets.

b. From Division Headquarters down to Subordinate Combat Unit/-Formation Under Command.

(1) Two telephone circuits to be provided over radio relay or wire/line.

(2) One secure telegraph circuit to be provided over radio relay or wire/line.

(3) One radio voice circuit which may be provided on a net.

(4) One radio telegraph circuit.

c. From Corps Headquarters down to Division.

(1) Three telephone circuits to be provided over radio or wire/line.

(2) Two secure telegraph circuits to be provided over radio relay or wire/line.

(3) One radio telegraph circuit.

d. From Corps Headquarters down to Brigade/Brigade Group/Equivalent Formation Operating Separately under Corps Control.

(1) Two telephone circuits to be provided over radio relay or wire/line.

(2) One secure telegraph circuit to be provided over radio relay or wire/line.

(3) One radio voice circuit which may be provided on a net.

(4) One radio telegraph circuit.

NORMAL SCALE OF COMMUNICATIONS TO BE PROVIDED

12. The scale of communication shown in paragraph 11 is the absolute minimum to be provided. Whenever possible, the scale of communication provided should be as follows:

a. Command Communications. Equivalent in type and quantity to that normally provided by the senior headquarters to equivalent echelons within its own army.

b. Lateral Communications. Equivalent in type and quantity to that normally provided by the unit/formation headquarters positioned on the left.

c. Supporting Unit Communications. Equivalent in type and quantity to that normally provided to a supported unit/formation headquarters within its own army.

STANDARDIZATION

13. It is essential to ensure that the armies are able to provide at least the minimum scale of communications (paragraph 11) without having to make special arrangements. To achieve this degree of integration, it is necessary to ensure that:

a. Voice operated radio sets and the associated security equipment designed for use at each level where inter-operated communications are essential, are capable of being inter-operable.

b. Only agreed procedure, call-signs and codes are used.

c. Telephones and switchboards can be inter-operated and that the need for ancillary equipment is kept to an absolute minimum.

d. Line and/or radio relay systems can be interconnected at audio terminals.

e. Telegraph equipment, and where necessary the associated security equipment, are inter-operable and that tape relay networks are capable of being interconnected. It is acceptable for this to be achieved by either special adjustment or the use of special equipment.

IMPLEMENTATION OF THE AGREEMENT

14. This STANAG will be considered to have been implemented when the necessary orders/instructions putting the principles and procedures detailed in this Agreement into effect have been issued to the forces concerned.

STANAG No. 2061

DETAILS OF AGREEMENT

PROCEDURES FOR DISPOSITION BY MEDICAL INSTALLATIONS OF ALLIED PATIENTS

1. GENERAL

It is agreed that the NATO* Armed Forces will use the standard procedures for disposition by Medical Installations of Allied Patients indicated in the paragraphs shown below.

The procedures outlined herein are based on the principles which should govern the return of patients received in Allied Medical Installations to their own National Organizations.

2. TRANSFER OF PATIENTS

a. The medical welfare of the patient must be the paramount consideration. When deciding upon the transfer of a patient, due consideration should be given to any increased medical hazard which the transfer might involve.

b. Arrangements for disposition of the patients should be capable of being implemented by existing organizations. Consequently, no new establishment should be required specially for dealing with the transferring of allied casualties.

c. Patients will be transferred to their own national organization at the earliest practicable opportunity consistent with the observance of principles established in paragraphs *a* and *b* above and under all of the following conditions:

(1) When a medical facility of their own nation is within reasonable proximity of the facility of the holding nation.

(2) When the patient is determined to require hospitalization in excess of thirty days.

(3) When there is any question as to the ability of the patient to perform duty upon release from the hospital.

d. The decision as to whether a patient, other than those requiring transfer under 2*c* above, is fit for release from the medical treatment facility is the responsibility of the commander of the medical facility treating the patient.

e. All clinical documents, to include X-rays, relating to the patient will accompany him on transfer to his own national organization.

f. The decision for suitability for transfer and the arrangements for transfer will be the responsibility of the holding nation.

g. Final transfer channels should be arranged by local liaison before actual movement.

h. Patients not suitable for transfer to their own national organization must be dealt with for treatment and disposition purposes as patients of the holding nation until they are transferred, i.e., they will be dealt with either in military hospitals, military medical installations, or in civilian hospitals that are part of the military medical excavation system of the holding nation.

3. CLASSIFICATION OF PATIENTS

Different channels for disposition will be required for the following two types of cases:

a. Patients Not Requiring Admission. Patients not requiring admission to a medical unit will be returned to their nearest national unit under arrangements to be made locally.

b. Patients Who Have Been Admitted to a Medical Installation. All such patients will be dealt with in accordance with paragraph 2 above.

*Also applies to CENTO and SEATO forces.

DETAILS OF AGREEMENT (DofA)

STRAGGLER CONTROL

AGREEMENT

1. It is agreed that the Armed Forces of the CENTO* countries are to use the following procedures for the effective control and prompt disposal of stragglers. These procedures are intended primarily for use forward of the divisional rear boundary, but a similar system, modified as appropriate, will be required in rear areas.

DEFINITION

2. For the purposes of this Agreement, stragglers are defined as military personnel who, in action, become separated from their units without proper authority.

CATEGORIES OF STRAGGLERS

3. Stragglers normally fall into the following categories:

(a) *Category A.* Any person who has lost his way and is attempting to rejoin his unit.

(b) *Category* B. Any person, whom it appears could not be held responsible for his actions by reason of a dazed or shocked condition.

(c) *Category C.* Any person running away for no apparent cause.

(d) *Category D.* Wounded personnel.

4. It is important that these categories be recognized and individuals handled accordingly.

METHOD OF ESTABLISHING CONTROL

5. Straggler posts should be established as required by appropriate commanders within their zone of responsibility and connected, if necessary by patrols. When stragglers of more than one nationality are expected, arrangements must be made for combined posts and patrols, i.e., those containing persons of each of the nations involved who have the necessary rank and authority to deal with stragglers belonging to their own national forces.

STRAGGLER POSTS

6. (a) A straggler post may include other functions, such as an information and/or check post etc.

(b) Posts within the division should normally be sited near the rear of brigades/regiments/combat groups, however, suitability of the ground will influence the exact siting of the post. Posts should be sited on main axial routes of the military road network (as defined in STANAG 2151) and if possible, close to a medical evacuation installation. All posts should remain laterally in touch at all times by means of patrols, thus ensuring that as many stragglers as possible are apprehended.

(c) Straggler posts in the forward area should be equipped with:

(1) Maps.

(2) A first aid box.

(3) Rations and facilities for making hot beverages.

DISPOSAL OF STRAGGLERS

7. The object is to return all stragglers to their units as soon as possible. After being screened:

(a) Any straggler who appears to be of security interest should be passed to security personnel for further interrogation.

(b) Those in Category A should be directed to their units at once.

*Also applies to NATO and SEATO countries.

(c) Those in Category B should be treated for shock and evacuated through medical channels.

(d) Those in Category C should be returned to their units under escort.

(e) Those in Category D should be directed or conveyed to the nearest medical installations in the chain of evacuation.

RECORDS

8. Particulars on each straggler as noted below should be kept at each straggler post and periodic reports submitted to the appropriate headquarters:

(a) Number, Rank, Name and Nationality.

(b) Unit.

(c) Whether armed or not.

(d) Where and when found.

(e) Place from which he was coming.

(f) Place to which he was going.

(g) Why he left his unit, etc., and when he was last with it.

(h) Disposition.

(i) Additional information.

IMPLEMENTATION OF THE AGREEMENT

9. This STANAG will be considered to have been implemented when the necessary orders/instructions putting the procedures detailed in this Agreement into effect have been issued to the forces concerned.

DETAILS OF AGREEMENT

REAR AREA SECURITY AND REAR AREA DAMAGE CONTROL

GENERAL

1. It is agreed that the CENTO* Armed Forces will establish a system providing for Rear Area Security and Rear Area Damage Control based on the principles and instructions contained in the succeeding pages and Annexes 'A' and 'B'.

SCOPE

2. This agreement is intended to provide for such planning as must be done by Field Armies, Communications Zones and/or Sections, and compatible commands, and units and installations within these commands. Whilst Rear Area Damage Control covered herein deals only with damage to military installations, it must be realised that damage to any civilian installation will have a repercussion on the military situation. It is emphasised that this agreement does not grant any additional powers to the Forces of the CENTO countries with respect to civilian authorities and civilian responsibilities. Co-operation with national military and civilian officials is essential at all levels and will be accomplished through the national military authorities.

DEFINITIONS

3. The following definitions will be used in dealing with these subjects:—

TERM	*DEFINITION*
Rear Area	For the purpose of this STANAG Rear Area includes: (a) The Land Communications Zone. (b) The rear of the Land Combat Zone in which are located the bulk of the logistical installations. (Army Service Area).
Rear Area Security	The measures taken prior to, during and/or after an enemy airborne attack, sabotage action, infiltration, guerrila action, and/or initiation of psychological or propaganda warfare to minimise the effects thereof.
Rear Area Damage Control	The measure taken in military operations prior to, during and after a mass destruction attack or natural disaster, to minimise the immediate effects thereof.

GENERAL PRINCIPLES

4. The following general principles concerning the preparation, use and format of plans and orders are applicable to both Rear Area Security and to Rear Area Damage Control:—

(a) For the Field Army, Communications Zone, Sections of the Communications Zone, and comparable Commands, it is desirable that responsibility for rear area security and for rear area damage control be combined in a single operation.

(b) An effective system for rear area security, rear area damage control and administrative support must possess the following characteristics:—

*Also applies to NATO and SEATO forces.

(i) A definite fixing of geographic responsibilities for these activities.

(ii) A single commander responsible for all three functions in the same geographic area.

(iii) A control organization which prevents conflict and competition between agencies responsible for rear area security, rear area damage control, and administrative support and includes an operation centre (and alternate operations centre if required) for all three functions and the necessary communications.

(iv) Provision of prompt integration of transit and lodger units into plans.

(c) The commander's plan for rear area security and for rear area damage control should be included in appropriate paragraphs of an Operations Order and/or appropriate annexes.

(d) Close co-ordination of plans for rear area security and rear area damage control is necessary at all levels.

(e) Full use should be made of automatic data processing equipment and other electronic and communications equipment to receive, collate and disseminate intelligence, radiological data including fall-out and other data, and to assist in the control of rear area security and rear area damage control operations.

REAR AREA SECURITY

5. In addition to the general principles outlined in paragraph 4, the following principles are applicable in the planning of rear area security:—

(a) The objective of rear area security planning is to prevent enemy interference by surface or airborne forces with administrative support operations and to destroy the hostile forces involved.

(b) Rear area security depends upon:—

(i) Troops assigned the primary mission of rear area security (e.g., national territorial troops, combat troops).

(ii) Other combat troops located temporarily within the area.

(iii) Service troops assigned within the area.

(c) All units are responsible for their local security, but, normally, service troops will not be allotted any security task other than that of their own installation.

(d) Tasks of other than service troops may include, but are not necessarily limited to:—

(i) Relief and rescue of attacked installations and units.

(ii) Route patrolling and convoy protection.

(iii) Surveillance of possible redoubt areas of guerrillas or infiltrators.

(iv) Planning for defence of possible drop and landing zones.

(v) Finding, fixing and destroying enemy forces operating in areas.

6. Annex 'A' outlines, in the Operation Order format, those items of basic information (*other* than that which would normally go into the order) that should be included in a typical rear area security operations plan or order. This is not to be construed as a complete order, nor is the information shown to be considered all of the possible additional information that might be required.

REAR AREA DAMAGE CONTROL

7. In addition to the general principles outlined in paragraph 4, the following principles are applicable in the planning of Rear Area Damage Control:—

(a) The army service area and communications zone contains lucrative targets or attack by mass destruction weapons. Detailed plans are therefore required to minimise the damage effects of such an attack.

(b) Rear area damage control plans are prepared, based upon an assumed degree of damage, to ensure provision of the means for minimising personnel casualties and damage to installations resulting from enemy action or natural disaster. They are based upon existing command organization; the

scope of the plans depending on the size of the area, location and size of installations and communication routes and facilities. Subordinate commanders will prepare detailed plans based upon the overall plan.

(c) Rear Area damage control measures provide for, but are not necessarily limited to:—

(i) Prior to an attack:—

(1) Clear lines of authority and responsibility down to the lowest level.

(2) Adequate communications and warning systems to include fallout warnings.

(3) Proper dispersion within and between installations continuously planned and executed.

(4) Preparation of necessary plans and SOP, to include reporting of information required for post-strike analysis.

(5) Organization, equipping, and training of all personnel in rear area damage control operations.

(6) Appropriate use of cover and concealment.

(7) Allocation, organization and full utilization of available transportation net and equipment, to include alternate plans.

(8) Deception measures.

(ii) During and after an attack:—

(1) Rapid assessment of the damage and its immediate action on operations.

(2) Control of personnel and traffic either in coordination with the local civilian authorities or by the military when essential for continued military operations when the civilian police are inoperative.

(3) Fire prevention and fire fighting.

(4) First aid and evacuation of casualties.

(5) Protection against chemical, biological, and radiological hazards.

(6) Emergency supply of food, clothing and water.

(7) Explosive Ordnance reconnaissance and disposal.

(8) Initiation of salvage operations.

(d) Available service units will normally furnish personnel, equipment and specialized assistance to carry out rear area damage control measures. The number of labour squads each unit will furnish will be prescribed in the current rear area damage control plan.

(e) Fallout from an atomic detonation poses a serious threat to the safety of personnel and the utilization of materiel and may be a limiting factor in the planning for and conduct of these operations (e.g. exposure time may be critical).

8. Annex 'B' outlines, in the Operation Order format, those items of basic information (*other* than that which would normally go into the order) that should be included in a typical rear area damage control plan or order. This is not be construed as a complete order, nor is the information shown to be considered all of the possible additional information that might be required.

REAR AREA SECURITY

OPERATION ORDER HANDING

(See STANAG 2014)

1. SITUATION

In the discussion of enemy capabilities, the following should be emphasised in a rear area security order (this list is not in any way limiting nor exhaustive):—

Enemy atomic capability.

Other enemy capabilities to:—

—Assualt with airborne elements;

—mount a guerrilla attack;

—execute air or guided missile attacks;

—execute sabotage or subversive missions;

—employ psychological warfare;

—execute a combination of these.

2. MISSION (No special instructions)

3. EXECUTION

In addition to the normal information given in this paragraph, a clear definition of the command and control organization should be given, based on existing facilities. Under the sub-paragraph dealing with "Coordinating Instruction":

a. Reference should be made to existing applicable plans, i.e., Anti-tank Plan, Anti-airborne Plan, etc.

b. A requirement should be established for subordinate commanders to submit their plans.

c. Necessary coordination to be effected with adjacent commanders, territorial commanders, and civilian authorities (through the appropriate territorial commanders) should be specified.

4. ADMINISTRATION AND LOGISTICS (No special instructions)

5. COMMAND AND SIGNAL (See paragraph 4 (b), DETAILS OF AGREEMENT.

REAR AREA DAMAGE CONTROL

OPERATION ORDER HEADING

1. SITUATION

In the discussion of enemy capabilities, the following should be emphasized in a rear area damage control order (this list is not in any way limiting nor exhaustive):—

Enemy capabilities to execute nuclear attacks and conventional air strikes without warning.

Assumption that the enemy may render one or more of the command areas helpless.

In the discussion of friendly forces, state what probable assistance (non-specialized) might be expected from adjacent areas, troop units in the area, and civilian agencies. It is recommended that this be stated even when such information is negative.

2. MISSION (No special instructions).

3. EXECUTION

In sub-paragraph *a* (normally the concept of operations), state the general concept of organizing for rear area damage control, and the employment of troops, facilities and equipment to render assistance to a damaged area.

From sub-parapgraph *b* onwards, by separate sub-paragraphs, annex and/or overlay, establish the organization by grouping of units, assignment of boundaries and specific tasks for each of the subordinate headquarters concerned, to include but are limited to:—

Responsibility, in order of priority, for the assumption of control of operations in the event one or more of the headquarters becomes inoperable.

Responsibility ofr providing troops, equipment and facilities to support operations of other sub-divisions and/or installations. Indicate the number, allocation and type of control forces (e.g. light rescue, heavy rescue, labour, medical, traffic control, fire fighting, decontaminating) that will be trained, equipped and available.

In the final sub-paragraph (normally co-ordinating instructions), necessary co-ordination to be effected with adjacent commanders, territorial commanders, and civilian authorities (through the appropriate territorial commanders) should be specified.

4. ADMINISTRATION AND LOGISTICS

In the sub-paragraph dealing with materiel, include information on the location of supplies especially needed to support this type of operation.

In the sub-paragraph dealing with evacuation and hospitalization:—

State the current policy pertaining to utilization of civilian medical facilities.

Designate collecting point and/or aid stations (with alternate locations provided for) to receive and classify casualties.

Provide for the extra load to be handled by hospital and evacuation facilities and state provisions required to augment local facilities for an emergency.

In the sub-paragraph dealing with personnel, include instructions for providing for mass burials.

In the sub-paragraph dealing with Civil Affairs/Military Government, it is essential that in occupied enemy territories with CAMG organizations, co-ordination be effected to ensure support for rear area damage control operations.

5. COMMAND AND SIGNAL (See paragraph 4 (b), DETAILS OF AGREEMENT).

STANAG No. 2084

DETAILS OF AGREEMENT

HANDLING AND REPORTING OF CAPTURED ENEMY DOCUMENTS AND EQUIPMENT

SCOPE

1. It is agreed that the NATO* Armed Forces will use the procedure detailed in part I for the handling of captured enemy equipment and associated technical documents and in part II for handling captured enemy documents. It is further agreed to use the item list of equipment and the description and procedure for these reports in Annexes A-F. Nothing in this agreement shall prejudice any national right on the equipment proper.

PART I

HANDLING OF CAPTURED ENEMY EQUIPMENTS (CEE) AND ASSOCIATED TECHNICAL DOCUMENTS

GENERAL

2. Captured enemy equipment and associated technical documents will be handled for exploitation with the minimum delay through the following processing channels:

a. Preliminary screening and reporting for information of immediate tactical value by national units assigned to NATO.

b. Secondary screening and complementary reporting by special intelligence support teams (Technical Intelligence Teams).

c. Detailed exploitation by Special Base Teams.

(A detailed list of the types of CEE to be processed is given in Annex 'A').

3. The technical intelligence reports and documents considered are:

a. Preliminary Technical Reports (submitted by the capturing Unit) (PRETECHREP) Annex 'B'.

b. Complementary Technical Reports (submitted by Technical Intelligence Teams) (COMTECHREP) Annexes 'C', 'D' and 'E'.

c. Detailed Technical Reports (submitted by Specialist Base Teams (DETECHREP).

d. Captured Enemy Technical Documents (TECHDOC) (Maintenance Handbooks, Operation Manuals, Drawings, etc.)

4. National Army, Navy and Air Technical Intelligence Teams should be provided to carry out the examination of captured enemy equipment for the information of immediate tactical value (where no requirement exist for a permanent Navy Technical Intelligence Team, such groups may be set up on and Ad Hoc Basis). They should be in a position to:—

a. Receive at the earliest possible moment any Preliminary Technical Reports,

b. Prepare and transmit the results of Complementary Technical Reports,

c. Dispatch items of equipment for specialist examination at base or to the captured equipments dept (which are to be established at a minimum of one per Army Group).

d. Liaise with POW interrogation units,

*Also applies to CENTO and SEATO forces.

e. Ensure that new equipment in possession of POW is examined as soon as interrogation units have finished with the items concerned; full use should be made of voluntary information which POW may give (see footnote).

f. Receive from intelligence channels all copies of technical documents which may assist them in their examination.

5. Technical Intelligence Teams should as far as possible be independent, (i.e. organic to the units earmarked or assigned to NATO) sufficiently flexible to cater for a variety and number of equipments. They will need to be equipped with suitable tools, transport and facilities for compiling and sending their reports from the field. Suggested allocation for these teams is given at Annex 'F'.

6. Specialist Teams are required to carry out the more detailed examination of captured enemy equipments to supplement the more superficial data which can be obtained in the field. Such Teams should be in a position after their examination to render the Detailed Technical Report. No suggested allocation is given for these Teams as they will depend on national resources available.

HANDLING OF CEE BY CAPTURING UNIT

7. Units locating enemy equipment of intelligence value will submit the Preliminary Report given at Annex 'B'. This report will be transmitted by using the accelerated intelligence reporting procedure, when it contains intelligence information which could have an immediate effect upon a current situation. Reports not containing such information will be transmitted by the quickest possible means with the precedence as determined by the commander initiating the report. These reports will contain a general description of the equipment and any technical information of immediate tactical importance.

8. Unit commanders will be responsible for placing the captured enemy equipment under guard in order to prevent looting, misuse or destruction before the arrival of the Technical Intelligence Field Teams.

9. All technical documents should be tagged, TECH Doc, or otherwise identified so as to avoid defacing, by capturing units or appropriate agencies so that in the normal exploitation of captured documents the Command concerned can provide duplicate copies for the guidance of all Technical Intelligence and Specialist Teams in their examinations. All such copies should accompany captured equipment until technical exploitation is finalized.

HANDLING OF CEE BY STAFFS AND TECHNICAL INTELLIGENCE TEAMS

10. The command concerned will notify the appropriate Technical Intelligence Team, which will arrange to examine the CEE on the spot or nearby where better field facilities may exist.

11. Having completed the field examination, the relevant parts of the Complementary report will be completed and sent through their own staff channels and the description of such equipment and any additional information of tactical value as can be extracted directly to such HQ as specified by NATO Authorities. The formats of these reports are given in Annexes 'C', 'D' and 'E'.

HANDLING OF CEE BY SPECIALIST TEAMS

12. Arrangements should then be made for the speedy evacuation of the equipment to the rear areas where suitable facilities exist for a detailed examination of the equipment by specialists.

Footnote: Regarding paragraph 4e., items of equipment taken from the POW to be examined, which, according to Article 18 of the 3rd Geneva Convention of 12th August, 1949, must be left with the POW, must be replaced by equivalent items serving the same purpose.

13. This will enable the completion of a Detailed Technical Report. No illustration is given of this type of report in view of the great variety of equipments involved. It should, however, follow the pattern already used by national technical exploitation agencies. Such reports will be submitted as soon as possible by Base Specialist Teams through the same channels as those laid down for Complementary Reports. If directed, national intelligence agencies should also be informed either after the Complementary of Detailed Technical Reports.

14. In the case where the capturing nation is not in a position to conduct an exhaustive field or rear area exploitation of the equipment the appropriate NATO authority will advise the capturing nation as to further action. In these cases, the exploitation agency should inform the capturing nation of the results of that exploitation.

PART II

HANDLING AND REPORTING OF CAPTURED ENEMY DOCUMENTS (CED)

GENERAL

15. Captured documents, except those belonging to CEE (TECHDOCS) or reproductions thereof, will be forwarded to the appropriate "Captured Document Centres" (CDC), which will be as a rule organic to Major NATO Commands for exploitation with the minimum delay through the following processing channels.

a. Preliminary screening for information of immediate tactical value by national units assigned to NATO.

b. Secondary screening, reproductions and dissemination to all concerned by special Intelligence Support Teams for CED.

c. Detailed exploitation and indexing will be performed by the CDC.

16. Captured documents will be divided into the following categories (see footnote):

a. *Type 'A'*—Documents which contain information concerning significant intelligence subjects, such as enemy order of battle, the employment of new weapons and equipment by the enemy, his logistic and morale situation, his losses, etc. Such documents require immediate operational exploitation, and the originals or microfilm copies must reach appropriate operational intelligence staffs at the earliest possible moment.

b. *Type 'B'*—Documents which contain information of value to intelligence staffs, but which is not of sufficient urgency for the document in question to be classified as Type 'A'.

c. *Type 'C'*—Documents which contain no information of apparent value to intelligence staffs.

d. *Type 'D'*—Documents which contain no information of value to intelligence staffs, but which require special handling.

e. *Type 'E'*—Cryptographic documents, all encrypted items and all documents relating to enemy radio systems.

HANDLING OF CAPTURED DOCUMENTS BY THE CAPTURING UNIT

17. The following rules for handling captured documents will apply:

The document will be forwarded without delay by the capturing unit to the staff under which the unit is operating, with details of the date time and place of

Footnote—Regarding paragraph 16, in some cases it will not be clear which category.

capture (with map coordinates), together with the name of the capturing unit and the circumstances under which the document was found.

18. Documents will be clearly tagged, or otherwise identified so as to avoid defacing, by the capturing unit in the following way:

a. *Identification letters:* Documents will be tagged showing the nationality of the capturing force by the national identifying letters prescribed in STANAG No. 1059—National Distinguishing Letters For Use By All NATO Armed Forces.

b. *Designation of Capturing Units:* This will include the service to which the unit belongs.

c. *Serial Number:* Units will give each document a serial number and should record the dispatch of the document in a way diary.

d. Date/Time of capture.

e. Place of capture (with map coordinates).

f. Summary of circumstances under which the document was found.

19. In cases, however, where documents are discovered by personnel of NATO staffs and units, and not by national forces assigned or earmarked for NATO, then the identification letters to be used will be NA. Other instructions in paragraph 18 above, however, will apply.

20. Whenever intelligence derived from a captured document is included in a unit or information intelligence report the identification letters and number of the document concerned will be quoted to avoid subsequent false confirmation.

HANDLING OF CED BY INTELLIGENCE STAFFS AND SPECIAL INTELLIGENCE SUPPORT TEAMS

21. The detailed procedures for handling captured documents will include the following main tasks:

: Screening
: Recording
: Translation
: Reproduction
: Dissemination

22. Intelligence staffs will ensure that there is no delay in type exploitation of captured documents. If for any reason, qualified personnel or microfilming facilities are temporarily not available or are insufficient to handle the volume or type of documents concerned, the documents will be forwarded immediately to the next higher echelon and will not be retained by the staff in question.

23. The staff concerned will handle the documents in one of the following ways:

a. *Type A:* (1) Where microfilming facilities exist, they will photograph documents with attached comments, and forward original documents direct to either the national agency or the appropriate NATO Intelligence Support Unit for exploitation, bypassing intermediate headquarters. Where suitable linguists are available microfilms will be examined for information of tactical value to local commanders.

(2) Where microfilming facilities do not exist, but suitable linguists are available, they will examine documents for information of tactical value to local commanders, attach appropriate comments and forward without delay to the appropriate higher headquarters.

(3) Where linguists are not available within the formation headquarters the documents should go to the POW interrogators for evaluation.

b. *Type 'B':* The staff concerned will in most cases according to SOP's forward 'B' documents direct to the appropriate NATO Intelligence Support Unit for exploitation.

c. *Type 'C':* Type 'C' documents will be handled as directed by appropriate authority.

d. *Type 'D'*: These will be handled as follows:

(1) Unmarked maps and charts of previously unknown types will be forwarded to the nearest engineer unit or topographical section.

(2) Personal mail and paybooks taken from POW will be returned to the POW after processing.

(3) Documents relating solely to items of captured equipment, if of intelligence value, will accompany the equipment to the intelligence agency responsible for exploitation and then will be sent without delay to the CDC.

(4) Other documents will be handled as directed by appropriate authority.

e. *Type 'E'*: These will be forwarded without delay to the Army, Navy or Air Force Headquarters, whichever is primarily interested.

24. Documents taken from crashed aircraft, including Type 'E' code books, call signs, frequency tables, identification symbols, etc. should be forwarded without delay to the nearest Air Force headquarters. Documents taken from a ship, including Type 'E' Code books, call signs, frequency tables, identification symbols, etc. should be forwarded without delay to the nearest Naval Force headquarters.

25. As a general rule, Maintenance Handbooks, Operation Manuals and drawings should accompany the captured equipment until the intelligence exploitation is completed.

HANDLING OF CED BY CDC

26. Lists of documents which have been exploited will be distributed to all Intelligence staffs by the CDC to avoid duplication in translating and processing identical documents by different units. A master list of all captured documents which have been exploited in NATO commands will be maintained.

27. When action on captured documents at CDC has been completed, the original documents will be sent to the National Staff whose forces captured them.

TYPES OF ENEMY EQUIPMENT to be collected and examined by Technical Intelligence Field Teams. (New Equipment of Equipment in the process of development ("significant equipment") will be the main concern of these teams.

	COMTECH REP
1. *Army Equipment*	
a. Guided Missiles	TYPE B
b. Ammunition, all types including mines, demolitions and pyrotechnics	(See Annex D)
c. Infantry weapons	
d. Sabotage equipment	
e. Armoured Fighting Vehicles	
f. Military Vehicles excluding AFV's	
g. Artillery, including anti-tank, anti-aircraft and field rocket weapons	
h. Guided missile launching systems	
i. Engineering, amphibious and river crossing equipments	
j. Electronics, infra-red detection and communication equipment	TYPE C (See Annex E)
k. Airborne equipment	
l. Special weapons, including nuclear, biological and chemical warfare equipment, flame and incendiary weapons equipment for dispersion of chemical and biological warfare agents together with protective devices	
m. Miscellaneous equipments:—	
(1) Camouflage equipment	
(2) Clothing and Personal Equipment	
(3) Medical equipment	
(4) Rations	
2. *Air Force Equipment*	
a. Aircraft, airframe and power plant	
b. Airborne, armament and ammunition, bomb sights, gun sights and photographic equipment	TYPE A (See Annex C)
c. Airborne radio and electrical equipment	
d. Miscellaneous airborne equipment, including instruments and controls, dinghies, parachute and other safety equipment.	
e. Ground equipment and installations	
f. Fuels, lubricants and greases and propellants	
g. Guided missiles and associated equipment	
h. Equipment for dispersion of chemical and biological warfare agents.	
i. Miscellaneous equipments:—	
(1) Flying clothing equipment, including G-suits, pressure breathing equipment, etc.	
(2) Medical equipments and flying rations.	

3. *Navy Equipment*
   a. Ships
   b. Missiles and launching systems
   c. Shipboard ordnance, including guns, fire control equipment, i.e., radars, range finders, stable elements, range keepers, spotters' telescopes, gun mounts

and turrets, ammuntion hoists, rammers, fuze setters, recoil mechanisms, ammunition, ammunition stowage facilities; ahead thrown weapons of all types including Hedgehogs, Mousetraps, Weapon 'A' equivalents, Limbo types, depth charge racks and 'Y' AND 'K' gun launchers; torpedoes and torpedo tubes, including A/W launchers; rockets and rocket launchers.

d. Sea mines, all types, including moored, bottom, and floating; contact and influence.

e. Harbour defense equipment including nets, booms, alerting devices, net tenders and ASDICS.

f. Navy electronics, infra-red, detection and communication equipment, sonars and fathometers.

g. Fuels, lubricants and greases and propellants.

h. Special weapons, including chemical warfare equipment, flame and incendiary equipment for dispersion of chemical and biological warfare agents, together with protective devices such as clothing, gas masks and canisters; salt water spray deck washing equipment for AER protection.

i. Medical supplies and medical instruments.

j. Demolition and sabotage equipment, UDT equipment (sleds, masks, etc.)

k. Naval engineering systems, including: main propulsion machinery, turbines, boilers, diesel engines, auxiliary equipment including motor and diesel engines, including fuel pumps and fuel oil heaters; pressure gauges, boiler accessories including safety valves, steam control valves, gauge glasses, feed water check valves; propellers, hull zinos, refrigerating machinery, submarine storage batteries and their ventilating equipment, ammeters, voltmeters, amp/hr meters; steering engines, engine room telegraph systems submerged atmospheric gas analysers, CO_2 scrubbers and air compressor.

l. Small boats and boat handling equipment, life rafts and signal apparatus.

m. Anchors, chains, windlasses, winches, cargo handling gear and ships' underwater logs.

n. Hydrographic survey ships equipment including high altitude research rockets and their launching equipment, sonars and fathometers, sea bottoms ampling gear such as drags and coring equipment, deep sea anchors, sea current measuring devices, biological sampling equipment, Nansen bottles, possible helicopters and other equipment such as laboratory instruments.

NOTES

1. Although such material is not specifically mentioned in the above lists (paragraphs 1, 2 and 3), technical intelligence teams will also be responsible for the collection of crytographic material. Special instructions for the handling of this equipment will be issued by the appropriate NATO command.

2. Where no requirement exists for permanent Naval Technical Intelligence Teams, such groups may be set up on an Ad Hoc bases.

PRETECHREP

To be submitted by accelerated intelligence reporting procedures immediately following the acquisition of "significant enemy equipment" (See paragraph 7, Details of Agreement).

A. Date found, location (map reference).
B. Type of equipment and quantity.
C. Origin.
D. Brief description with distinguishing marks.
E. Technical characteristics with an immediate value.
F. Signature of the Commander of capturing unit.
G. Time and origin of the message.

COMTECHREP—TYPE A

To be submitted by the fastest available means immediately following initial examination of enemy aircraft.

A. Date and location of crash and map of reference.
B. Type of aircraft and (1) overall length; (2) overall wingspan.
C. Identification and distinguishing marks.
D. Type of engine(s) and condition.
E. Cause of Crash; number, location and calibre of projectile strikes; condition of aircraft.
F. Armament
   (1) Guns of all types, installation positions, quantity.
   (2) Ammunition and number of magazines.
   (3) Bombs and bomb installations.
   (4) Mines and mine carriers.
   (5) Rocket projectiles and carriers.
   (6) Pyrotechnics, number and type.
G. Armour plate: quantity, positions, thichness, strikes, penetrations.
H. Number of crew and fate.
I. Wings and control surfaces: leading edge, if protected against balloon cables by cutters, strengthening or other special devices; de-icing.
J. State if samples are obtainable of:
   (1) Gasoline
   (2) Oil
   (3) Coolant
   (4) Hydraulic fluids
   (5) De-icing fluids.
K. Internal equipment: state condition and whether bombsights, radio, photographic equipment and electronics equipment and instruments are standard. If not specify modifications, alterations or omissions. Obtain radio frequency setting, if possible.
L. Landing gear: type and condition.
M. General remarks and special points or unusual features not mentioned.
N. Name plates photographed:
   (1) airframe
   (2) engine
   (3) others.
O. Other information.
P. Name of officer in Command Tech. Int. Team making examination.
Q. Time and origin of message.

COMTECHREP—TYPE B

COMTECHREP TYPE B is used for reporting information about ammunition, missiles, bombs, shells, rockets, projectiles, mines torpedos, etc.
To be submitted by the fastest available means immediately following initial examination.
(Only those letters to be used for which information is available).

A. Nationality, designation and mark number.
B. Description.
C. Overall length of missile, including fuze, tail, vanes and fittings.
D. Maximum diameter of missiles.
E. Shape and design of missiles (streamlining shells).
F. Length and width of tail.
G. Span of vanes.
H. Thickness of casing at nose.
I. Thickness of casing at sides.
J. Thickness of casing at base.
K. Material of body.
L. Material of tail or vanes.
M. Colour and marking of nose.
N. Colour and marking of body.
O. Colour and marking of tail or vanes.
P. Weight and nature of main filling.
Q. Total weight of missile.
R. Method of suspension.
S. Detonation system.
T. Fusing systems and markings.
U. Anti-handling or booby-trap devices.
V. Method of propulsion.
W. Date and location of missile.
X. Other information.
Y. Name of officer in command of the Technical Int. Team making examination.
Z. Time and origin of message.

COMTECHREP—TYPE C

To be submitted within 72 hours following the acquisition of an item of captured equipment not covered under Types A and B.

A. Date found, location (map reference).
B. Type of equipment and quantity,
C. Origin.
D. Description with distinguishing marks (additional details).
E. Conditions of equipment.
F. Technical characteristics of immediate tactical value (additional details).
G. Recommended disposal.
H. Name plates photographed.
I. Photographs taken.
J. Other information.
K. Name of Chief of Team.
L. Time and origin of message.

TECHNICAL INTELLIGENCE TEAMS

1. Army and Air Teams should be provided by national forces assigned to NATO on the following minimum bases:

a. Where forces concerned are operating on one front or on a peninsula (Norway, Denmark, Italy, Greece): two Army and two Air Teams.

b. Where forces concerned are operating on two fronts on a peninsula (Turkey): two Army and two Air Teams per front.

2. See paragraph 4, Details of Agreement, regarding Naval Teams.

3. It is recognized that as these teams will be furnished on a national basis their composition will be somewhat determined by national characteristics. However, the following composition of Air and Army Teams is suggested as a standard in order to give adequate Technical Intelligence support to the fighting forces:

a. *Air Team*

(1) Airframe-Engine Equipment.
(2) Armament.
(3) Radio-Electronics.
(4) Administrative-photos, reports, transport, and equipment.
(5) Guided Missile Ordnance.

b. *Army Team*

(1) Vehicles, Tanks.
(2) Engineering Equipment.
(3) Armament.
(4) Radio-Electronics.
(5) Guided-Missile Ordnance.
(6) Administrative.
(7) Nuclear-Biological-Chemical Specialist.

STANAG NO. 2087

DETAILS OF AGREEMENT

MEDICAL EMPLOYMENT OF HELICOPTERS IN GROUND WARFARE

AGREEMENT

1. It is agreed that the NATO* Armed Forces are to follow the principles outlined herein in planning for and organizing the medical employment of helicopters in ground warfare, missions which fall within the purview of the Army regardless of which force operates the helicopters.

GENERAL

2. Control of operations is to be done according to local directives and the organization of the forces concerned.
3. Emergency helicopter evacuation is concerned with the prompt movement of medical or surgical patients where rapid, automatic evacuation or treatment will reduce morbidity and mortality. Such patients must be picked up as soon after the request for air evacuation as possible and evacuated directly to designated treatment facilities.
4. Routine helicopter evacuation is used when surface means are either nonexistent or inadequate or where aerial evacuation is more effective. In these cases, time is not of the same essence as in the emergency category. If properly prepared prior to evacuation, routine air evacuees will require only nominal inflight medical care.
5. Helicopter ambulances are used as far forward as the tactical situation will permit. If necessary, this may apply to evacuation from enemy territory.

REQUEST FOR EVACUATION

6. The unit surgeon initiates helicopter evacuation missions by direct contact with the surgeon of the command echelon concerned, i.e., the battle group/regiment, the division, the corps, the army. Requests for these missions may be processed through medical technical channels or command channels according to local directives and the organizations of the force concerned.
7. In order that the surgeon and the controlling agency may be able to properly evaluate and establish priorities for evacuation the request should contain the following information:
   a. Number, diagnosis and priority of patients (URGENT, as soon as possible, PRIORITY, in 24 hours; ROUTINE, approximately 72 hours).
   b. Identification as to litter or ambulatory type of patient.
   c. Exact location by grid coordinates or other method as directed by the tactical field SOP.
   d. Specific identification of landing site.
   e. Time patients will be ready for evacuation.
   f. Special requirements for:
      (1) Special items of medical supplies.
      (2) Whole blood.
      (3) Medical personnel to act as escort.

PRIMARY MEDICAL MISSION

8. The primary mission of medical air ambulance units and helicopters made available for medical purposes is to provide aeromedical evacuation for selected patients.

*Also applies to CENTO and SEATO forces.

SELECTION OF PATIENTS

9. Based upon the decision of the medical officer in charge, suitable types of casualties for helicopter evacuation are to be:

a. Those for whom helicopter evacuation is necessary as a life-saving measure.

b. Those who, by prognosis, would definitely benefit by helicopter evacuation.

c. Those who urgently require specialized treatment.

d. Those who are likely to suffer unnecessary pain or discomfort unless evacuated by helicopter.

e. Those likely to go into shock as a result of prolonged or rough surface evacuation.

SECONDARY MISSIONS

10. Secondary missions of helicopters made available for medical purposes should include:

a. Airlift of critical medical supplies.

b. Aerial movement of medical specialist personnel.

c. Movement of casualties to hospitals capable of providing specialized surgical treatment.

d. Other medical evacuation missions as required.

LOADING, SECURING, AND OFF-LOADING

11. The pilot of the helicopter is responsible for seeing that patients and equipment are loaded in the aircraft in accordance with the prescribed methods outlined in the applicable flight handbook. The final decision as to how many patients may be safely loaded and their locations, lies with the pilot in command of the aircraft. When helicopters are permanently allotted for medical evacuation mission, the pilot is also responsible to see that medical property exchange is accomplished as required.

12. Commanders of medical treatment facilities will provide personnel in the landing area to assist in loading and offloading of patients and equipment. The pilot and crew of the helicopter are responsible for the securing of patients and equipment on board the helicopters. Training of all medical personnel is to include—

a. Familiarization with all types of helicopter capable of performing medical evacuation missions;

b. Familiarization with the medical care likely to be required during flight and with the special medical equipment necessary for this purpose;

c. Demonstrations of the various types of safety devices used for the transportation of casualties by helicopter.

13. In the absence of medical personnel in the landing area, the commander of the unit concerned is to provide personnel for loading the patient evacuees on the helicopter.

MISCELLANEOUS

14. Medical agencies are also responsible for—

a. The movement of patients to and from helicopter landing sites.

b. Rapid loading and unloading of patients.

c. In-flight medical care.

15. A communication capability, which provides for direct or minimal relay of transmissions, between the surgeon or headquarters controlling evacuation missions, the helicopters, and the requesting surgeon is to be provided whenever possible. Communications are to be minimized by relaying accurate information in the original request for ambulance service. An air-to-ground communications capability at the landing site is desired.

PREPARATION AND MARKING OF LANDING AREAS

16. For the preparation and marking of temporary landing areas and of approach and takeoff areas for helicopters, see STANAG 2125 (Selection of Approach and Take Off Areas and the Marking of Temporary Landing Areas for Helicopters during Preplanned Operations) and ACP 136 (Communication Instructions—Panel Signalling).

IMPLEMENTATION OF THE AGREEMENT

17. This STANAG will be considered to have been implemented when the necessary orders/instructions have been issued directing the forces concerned to put the content of this Agreement into effect.

DETAILS OF AGREEMENT

PRINCIPLES AND POLICIES OF MOVEMENTS

(Studies C17, C19, C35, and C36)

General Remarks

1. Standard terminology is not essential to this study.
2. Any standard terminology applicable to this study which later may appear to be desirable may be forwarded directly to the Military Agency for Standardization Terminology Coordinator for standardization consideration.

SOLOG Agreement

PART I—PRINCIPLES OF MOVEMENTS (C17)

The ABC Armies agree that the principles of movements are:

1. Control of movements will be centralized to the highest level at which it can be adequately exercised.
2. Movements will be regulated.
3. Movements will be fluid and flexible.
4. Maximum utilization will be made of carrying capacity.

PART II—MOVEMENTS* RELATIONSHIPS (C19)

The ABC Armies agree that:

1. The relationships between Movements* and the transport services will be:
   a. Movements* will decide the mode of transport necessary to implement the movements program.
   b. Movements* will allocate traffic by tonnage and destination.
2. The relationship with transport users will be:
   a. Movements* will be the agency to which all users of transport will go to obtain transport space.
   b. Movements* will be the intermediary between transport users and transport services, except local and/or internal hauls.
3. Movements* will decide, in accordance with Movements Plan, what will be moved, where it will be moved, when it will be moved, and the mode of transport, but not how the selected transport service will operate.**

PART III—MOVEMENT EMBARGOES (C35)

It is agreed among the ABC Armies that:

1. "Movement Embargoes" be adopted as the tripartite term for restrictions temporarily placed on traffic into and/or out of installations to permit clearance of or prevention of congestion.
2. Movement embargoes be placed only by authority of the commander cognizant of the effect of an embargo on overall logistical problems.
3. Movement embargoes be implemented through Movements* Staff channels.

PART IV—MOVEMENTS PRIORITIES (C36)

It is agreed among the ABC Armies that:

1. Movements Priorities are the order of precedence of movements within assigned allocation.
2. Overall policy for priorities is expressed by the theater command.
3. Movements personnel* interpret this policy and disseminate the necessary information to accomplish movements by means of detailed movements programs and instructions.

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*The Q Movements Staff in the British Army.
The Transportation Movements Staff in the U.S. Army

**In the case of British Road Movement, the Movements* Staff may issue instructions regarding routes, timings, etc.

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